Contents

COVER BY RALPH BUTLER

The *Defense Management Journal* is a quarterly publication of the Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics). As a forum for the interchange of ideas, the *DMJ* publishes articles on current defense policies and on methods for improving defense management. Unless otherwise stated, the views herein are those of the authors and are not necessarily those of the Department of Defense or any of its elements.

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In his preface to *Soviet Military Power 1983,* Secretary of Defense Caspar W. Weinberger highlights more than a dozen major expansions of Soviet military might that have occurred in the last two years as the U.S.S.R. allocated an estimated 15 percent of gross national product to its military build-up. Mr. Weinberger observes: "It is our duty to have a full awareness of Soviet military growth, modernization and capabilities and to shape our defense forces and our deterrent capabilities accordingly. We can do no less if we are to provide fully and wisely for our security, and that of our Allies. Ours is a formidable task, made more difficult by a decade of our neglect coupled with two decades of massive Soviet increases. But, we and our Allies can accomplish the task if we have the will, the courage, and the resolution. . . ."

This issue of the *Defense Management Journal* demonstrates the breadth and depth of the Defense Department's resolve to reverse the effects of that "decade of our neglect." For DoD has under way a broad array of productivity-enhancing initiatives designed to foster readiness through maximum gains in efficiency.

The department's productivity-enhancing capital investment program, for example, funds a wide range of cost- and labor-saving investments which return start-up costs within two or four years, depending on the type of funding. Savings accrued through the program, which are expected to be on the order of 14-to-1 or more for every dollar invested, will in turn alleviate certain personnel and funding shortfalls by converting today's inefficiencies into tomorrow's reemployable resources.

The department has also directed its components to establish a formal system of efficiency reviews of in-house activities that are not candidates for contracting out. Derived from management techniques developed in connection with the A-76 cost study process, the efficiency review program requires DoD components to develop performance work statements which clearly describe the work to be performed as well as the established quality, quantity, and timeliness standards for performance of that work. Activities achieving the resource savings goal of 4 percent can reapply such funds to other bona fide requirements.

To improve the productivity and responsiveness of the defense industrial base while reducing materiel acquisition costs, DoD sponsors a variety of other programs as well. Among them are the manufacturing technology program and the industrial modernization incentivos program. The latter, presently being tested, is directed at overcoming the contractual problems of program uncertainty and a profit policy which is based on cost.

Equally important are DoD's initiatives to make its workers more productive. Utilizing both behavioral science and management analysis techniques, service- and agency-directed initiatives include such diverse strategies as organizational effectiveness, job enrichment, quality circles, and performance-contingent reward systems.

All of these programs and more are described in detail in this issue's smorgasbord of theme articles. And as added dressing, we offer a special report by *DMJ* Senior Editor David R. Lampe on the Office of Personnel Management's conference, "Risk-Taking and Earning Rewards in Federal Employment," held in June in Harpers Ferry, West Virginia. If you are confused about the intent and extent of the reforms being sponsored by OPM, this article should help you make a more informed judgment about your future in, and the future of, the civil service.

Good reading! **DMJ**

A matter of priorities

By PAUL W. THAYER
Deputy Secretary of Defense

Improving productivity is one of the most formidable challenges facing America and the Defense Department today. It affects our economic well-being and our national security. Atter a rude awakening in the international marketplace, we can no longer be complacent about the continued productive superiority of the United States. Today our technological leadership is challenged across a broad range of processes and products.

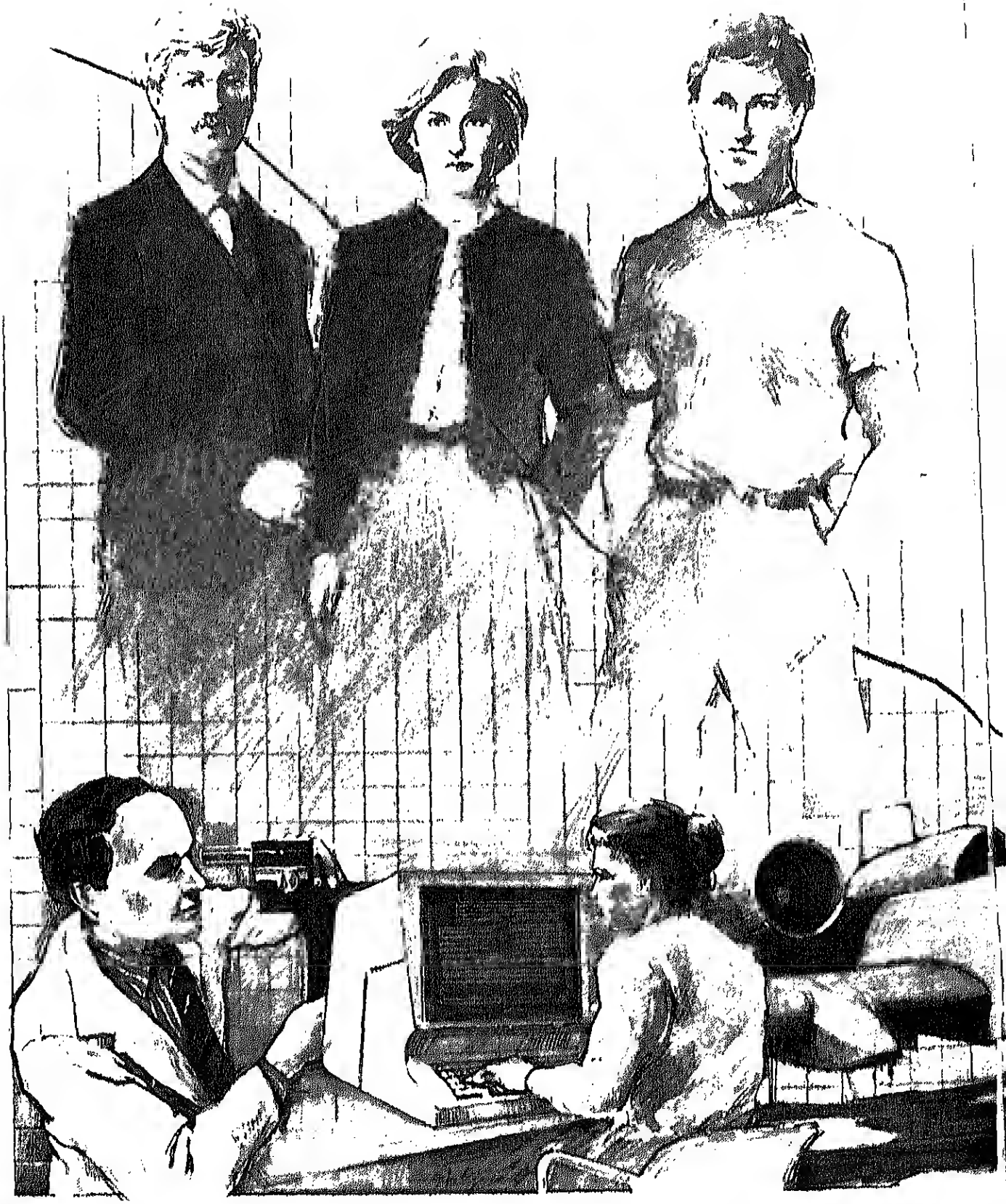
America still has the most highly skilled and talented work force in the world, and we maintain the highest level of output per worker of any country in the world. But recently there has been a disturbing decline in the rate ot productivity growth. The Department of Defense has a special interest in reversing that trend, particularly as it affects developing and building complex and sophisticated weapon systems to meet national security objectives.

With expanding commitments but limited resources, the Defense Department must improve productivity to sustain a strong deterrent force and maintain a high degree of readiness. To assure that we buy the best weapons at the most reasonable price, we have been improving our internal procurement practices while offering incentives to defense contractors to improve their productivity. We have been seeking out every trace of waste, traud, or inefticiency in the Pentagon and restoring good honest business practices to the defense marketplace.

We must also continue to look for new ways to improve productivity. We are tocusing on several management reforms—multiyear procurement, economic production rates, enhancing competition, and more realistic budgeting. Wherever possible, we are looking to the private sector to perform support functions and to implement our commercial activities study programs. We are also trying to institute interservice arrangements to handle common functions. Finally, we are improving efficiency throughout all our operations by establishing realistic work statements keyed to mission requirements and then conducting tough efficiency reviews against those standards.

We expect to see progress. The Defense Department has been conducting an aggressive productivity-enhancing capital investment effort and has been applying the latest techniques in work force motivation and operational improvements. These efforts provide the tools and resources necessary for a successful attack on inefficiency and declining production. But they will only work if individual DoD managers use those tools wisely and take advantage of every opportunity to improve production.

I am confident that defense managers have the vision and dedication to meot those critical challenges. I pledge you my full support. If we work together to revitalize American productivity, we will be doing our part to restore our nation's economy and strengthen America's defenses. DMJ



Civilians in defense—the resource and the challenge

By LAWRENCE J. KORB

Qualified, motivated civilian personnel are essential to meeting the nation's defense needs, and DoD is pursuing several initiatives designed to maintain an adequate supply of that resource and to use it productively.

References to essential manpower requirements in the Department of Defense typically conjure the image of trained and ready uniformed personnel. But in fact the department could meet neither its peacetime nor wartime missions without the skills and effort of its federal civilian work force. Because efficient use of this resource is so critical, DoD recently inaugurated several programs to enhance productivity among its civilian personnel. Attracting, retaining, and motivating qualified employees is likewise essential, and the department has undertaken initiatives in this area as well. This article highlights some of these efforts and some important benefits realized as a result of measures already implemented.

By 1984, the Defense Department plans to employ about 1,072,000 civilians—approximately one civilian for every two active-duty military personnel. The civilinn payroll in 1984 is estimated at $26.7 billion, or about 11.1 percent of total defense outlays. Civilian payroll costs are about two-thirds the level of total military payroll costs. For this investment, DoD will employ 986,500 direct-hire employees and 85,700 foreign nationals whose services are provided through their parent governments. A little over one-third of our direct-hire employees are wage-grade workers; the balance are general schedule.

Why such a comparatively large investment in civilian employees? Basically, it reflects our national posture regarding the appropriate role of standing armies. Defense instruction directs that military incumbents be assigned only to positions for which they are required by law, training, security, discipline, rotation, combat readiness, or need for military background. Defense guidance stresses that the services should program adequate military personnel to meet military contingencies and a cost-efficient mix of civilian, military, and contractor personnel to meet the balance of requirements. The same guidance proposes specific strategies to achieve this mix. They include increased funding of productivity-enhancing capital investments and aggressive use of such management tools as efficiency reviews, A-76 cost studies, and interservice and intraservice sup-

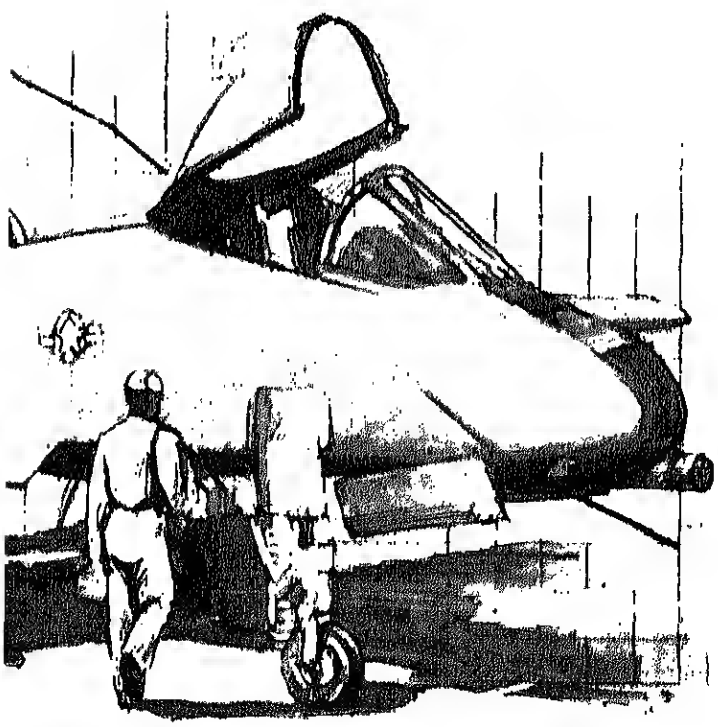
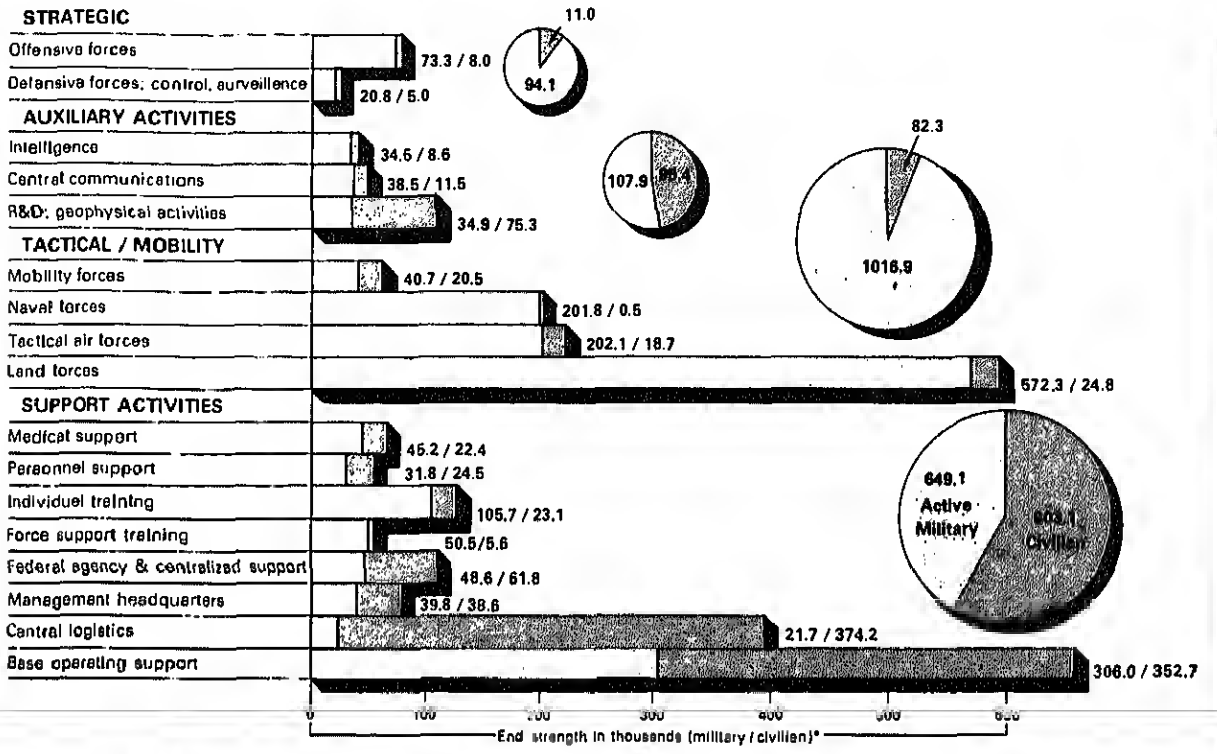


ILLUSTRATION BY LAURA STUTZMAN

The Defense Department's personnel requirements in FY 1984

DoD plans to employ about 1,072,000 civilians in 1984, with the bulk of them working in support activities. The civilian payroll, estimated at $26.7 billion, is about two-thirds that of the active-duty military and constitutes slightly more than 11 percent of total defense outlays.



*Excludes 308,800 active-duty military in "Individuals" account

port agreements.

In its commitment to improving the nation's overall defense posture, the Reagan administration has placed particular emphasis on force readiness and sustainability. Consequently, the bulk of our civilian employment directly supports defense readiness requirements. As the figure indicates, civilian employees perform most of our logistics and base operations support work; they predominate in research and development efforts as well. Civilians also make up a substantial portion of full-time assets devoted to medical and personnel support, personnel training, and essential auxiliary activities, including intelligence and communications operations.

Civilian manpower is not a program in and of itself. It is one among several critical resources necessary for accomplishing defense program objectives. In order to achieve this administration's goals efficiently, a reversal of post-Vietnam era drawdowns in civilian employment levels was essential. As such, our FY 1984 end strength projections are 8 percent higher than 1980 levels. This increase reflects our commitment to balancing resource requirements and funded workload. Programming for civilian personnel ceilings which are substantially below funded workload does not save money; it simply encourages inefficient management practices such as removing temporary employees from the rolls for the last day of the fiscal year.

During FY 1983, a large segment of the Defense Department will have the opportunity to demonstrate that it can operate effectively and efficiently without personnel ceilings. Section 788 of the FY 1983 Appropriations Act removed personnel ceilings for one year in industrially funded activities, which make up about 30 percent of our direct-hire labor force and perform work such as depot-level maintenance of ships and airplanes. The department will closely evaluate how the lifting of ceilings affects resource management and operational costs. Giving managers of industrially funded activities greater flexibility should enable them to accomplish their mission more efficiently. For example, a manager unconstrained by personnel ceilings can shift

his attention from maneuvering around those ceilings to achieving the most cost-efficient mix of full-time employees, temporary workers, and overtime to accomplish his workload.

In addition to expanding our civilian work force to meet peacetime requirements, we are examining how many more workers would be needed during mobilization and how we would obtain this additional labor. The increased emphasis in this area redresses a long period of neglect. During Proud Saber, the fall 1982 mobilization exercise, DoD tested emergency procedures for obtaining civilians at Army, Navy, and Air Force installations in Virginia's Tidewater region and identified several problems that could hamper a rapid expansion of the defense civilian work force. Among them were difficulties in recruiting highly skilled workers in occupations with low unemployment rates, coordinating the demands of government installations and defense industries for the same types of personnel, and expressing requests for mobilization workers in the same job classification codes used by local public employment offices. DoD is working with the Department of Labor and the Federal Emergency Management Agency to solve these problems and to ensure that the people needed to support the military during a crisis are readily available.

Our responsibilities as civilian manpower managers in DoD go beyond identifying the resources necessary to execute peacetime and wartime defense programs. We are also actively pursuing a productivity improvement strategy to ensure that we use those resources as efficiently as possible. This strategy involves three interrelated approaches: operational improvements through commercial activity cost studies, efficiency reviews, and interservice and intraservice support agreements; capital investments to enhance productivity; and work force motivation programs.

Critical to the commercial activities cost study process are performance work statements, which generate savings through better definition of mission requirements. Performance work statements establish quantity, quality, and timeliness criteria for the output of specific functions. Once such statements are established, the internal work force competes, on the basis of cost, with private-sector business to perform support activities which are neither governmental in nature nor combat-related. By streamlining in-house organizations and procedures in order to compete effectively, managers have reduced their manpower requirements by substantial percentages.

The efficiency review program extends application of performance work statements to support activities not suitable for contracting. By improving operations and streamlining their organizations, activities which undergo efficiency reviews should be able to reduce resources required by at least 4 percent. This process will free resources which can then be reapplied to meet deferred requirements. Finally, the Defense Retail Interservice Support program is an effort to combine operations or workload under single managers to achieve economies of scale.

We recognize the importance of incentives to achieve more efficient operations. For these programs, the Office of the Secretary of Defense is evaluating component progress against the manpower savings goals established in defense guidance and allocating a pool of civilian manpower based on accomplishment of those goals. This incentive system, adopted in the 1984 program objective memorandum review, represents an attempt to reverse the psychology "that those who manage to work with less get less to work with." Rather, we believe that our most efficient operations should receive recognition and encouragement to sustain their efforts.

Integral to operational improvement is investing in productivity-enhancing capital investments (PECI). The two major efforts sponsored by DoD are productivity-enhancing incentive funds (PEIF) and, on a larger scale, productivity investment funds (PIF). In 1984, the $33 million investment in productivity-enhancing incentive funds will finance small-dollar, off-the-shelf items which make individual tasks easier and more efficient and which return investment costs within two years. Productivity investment funds finance major, long-term expenditures ($100,000 or more) for equipment and facilities which return cost of investment within four years. For example, the productivity investment fund financed a project for applying bar code technology throughout the defense logistics system. This state-of-the-art technology for inventory and control management is similar to that now used in supermarket checkout lines. Its $67 million cost is projected to be recouped within the first year of operation. Other efforts funded under the productivity investment fund program include command-wide office automation systems, computer-assisted training equipment, and automated materials-handling systems. The FY 1984 defense budget included $128 million for productivity-enhancing capital investments which are expected to save about $1.1 billion over the life of the equipment.

While productivity-enhancing capital investment funds are a relatively small portion of the budget (less than one-tenth of a percent), they nonetheless do yield significant downstream returns—approximately $11 for each $1 invested, with internal rates of return exceeding 70 percent. To encourage such investments, the military services and agencies are permitted to reapply savings

realized to valid, unfunded workloads.

DoD has long recognized that motivated workers are a major force in improving productivity and has applied behavioral science techniques within the department to increase motivation. The most widely employed technique is the quality circle, some 1,300 of which are already operating throughout DoD. Quality circles have resulted in both tangible and intangible improvements in morale and productivity. The Norfolk Navy Shipyard, for instance, has realized a return of $3.25 on each $1.00 invested in quality circles. Modifications to a tool storage facility, a recommendation from one quality circle at the shipyard, resulted in annual savings of more than $99,000.

Other efforts to motivate the DoD work force include experiments in the use of pay for performance. Both the Army and Navy have tested performance-contingent pay systems, which give back to employees part of the savings achieved when employee performance exceeds established standards. In one project involving shipyard data entry, the Navy was able to increase productivity by 25 percent, reduce its workload backlog, and stabilize its data entry work force. Such experiments effectively demonstrate that DoD can motivate its workers to be more productive by sharing productivity gains with them in the form of increased pay.

If DoD is to maximize the strength of our defense posture in today's climate of high costs and limited government resources, improvements in productivity are essential. The productivity program, in concert with other government and congressional initiatives, is expected to be a major contributor to maintaining the close balance between increased mission requirements and resource constraints.

In addition to improving productivity, the department faces a major challenge the next ten years in attracting, retaining, and motivating the civilian work force we need, while at the same time adapting to changing personnel policy approaches. Some of these new approaches derive from the Civil Service Reform Act (Public Law 95-454) enacted in 1978, and the Department of Defense now has in place policies and procedures covering major program changes required by the act. Areas affected include labor-management relations, merit pay, the Senior Executive Service, appraisal systems, merit system principles, and adverse action appeals.

While we have completed the shakedown period on comprehensive reforms passed under the Civil Service Reform Act, major issues confront the department in several other areas. The most significant are the compensation and benefit changes proposed in the President's budget for Fiscal Year 1984, improvements in merit pay systems, more effective linkage between pay and employee performance, adjustments in the wage-grade pay-setting methodology, and further refinements in our labor-management relations process. Each raises important concerns and is receiving attention within the department.

The President's budget for FY 1984 proposes legislation which would freeze pay for federal workers and make major revisions to the civil service retirement system. Since the retirement system has been a key attraction to the career federal service, DoD is carefully evaluating the effect that these changes are likely to have on our ability to attract and retain a highly skilled work force. We are particularly concerned about some disciplines in which we have had recruitment problems in the past, for example, engineering and the sciences.

"By streamlining in-house organizations and procedures in order to compete effectively, managers have reduced their manpower requirements by substantial percentages."

Linking pay and performance is a related area of considerable interest to Defense Department managers. In recent years, government personnel specialists have emphasized establishing performance-based compensation systems for civilian employees. This emphasis eventually led to the merit pay system now in place, the intent of which is to give supervisors and management officials at the GS-13 through GS-15 levels monetary awards and recognition commensurate with the quality of their performance.

DoD is pursuing two initiatives that affect compensation policy—merit pay system reform and a Navy personnel management demonstration project. The department has concluded that, in spite of more than two years of implementation efforts, the merit pay system is not achieving all of its objectives. Many managers and supervisors whose performance is fully satisfactory or better have received smaller salary increases than have their nonmerit pay subordinates. Merit pay employees also have seen their salaries fall below levels they would have attained had they remained under the general schedule and sustained the same quality of performance. As a result, many view the merit pay system as one that penalizes rather than rewards.

While we are unhappy with the current merit pay stem, the department still strongly supports the con- pt of performance-based incentives. In the interests a more effective pay-for-performance approach to ilian compensation, we have therefore developed and commended to the Office of Personnel Management egislative proposal which will correct deficiencies in e current merit pay system. Major provisions of the oposal are:

- Inclusion of all GS-13s through GS-15s.
- A guarantee of full comparability adjustments for employees rated fully satisfactory or better.
- Authority to withhold all or part of comparability m less-than-satisfactory performers.
- Regular within-grade increases for fully satisfactory rformers.
- Elimination of quality step increases.
- A system of meaningful cash awards for quality rformers.

s this package wends its way through the legislative ocess, it may be modified. However, support for the pes of changes we are recommending is so widespread at the outlook for passage is promising.

DoD supports innovation and tries to institutionalize successes. One recent innovation in personnel manement, a performance-based incentive system, has en particularly successful. Two Navy laboratories, the avy Ocean Systems Center at San Diego and the Naval eapons Center at China Lake, California, are using e system in connection with a personnel management monstration project being conducted under authority the Civil Service Reform Act.

The Navy undertook the project to determine if acities could increase mission effectiveness through a ore responsive and flexible personnel management stem. The system features an integrated approach to y, performance appraisal, and position classification d allows greater managerial control over personnel nctions. Specifically, the demonstration system inides:

- General classification and performance standards.
- General classification levels to replace existing general schedule grades and the fine distinctions they reire.
- Broad pay bands within classification levels, with dividual pay adjusted annually by placing the emoyee into one of five incentive pay groups based on rformance-by-objectives.
- Streamlined adverse action procedures when an nployee migrates to a lower classification level beuse of unacceptable performance.

After two years under the system, managers at both cations report positive results. They find that the quality and quantity of newly hired professionals has improved, as has retention of quality performers. Also, they note that the system has fostered better relationships between supervisors and employees and has promoted understanding of what each employee is expected to accomplish during the rating period. Streamlined personnel processes have eliminated 50 to 80 percent of the previously required paperwork.

After thorough review by a DoD-wide study group comprised of managers and personnel specialists, we decided to seek authority to extend permanently the compensation aspects of the demonstration project to other DoD organizations. We have drafted a legislative proposal and expect to submit it formally for consideration later this year.

An area of civilian compensation frequently overlooked is the federal wage system, which applies to the department's 300,000 blue-collar employees. The department employs approximately 75 percent of the total federal wage system work force. The wage-grade system, which is designed to provide pay comparability on a locality basis, has been in existence for ten years and has undergone very little change during that time. By introducing some specific legislative proposals, DoD plans to take the lead within the next few months in bringing about some overdue changes in the system.

"While productivity-enhancing capital investment funds are a relatively small portion of the budget (less than one-tenth of a percent), they nonetheless do yield significant downstream returns—approximately $11 for each $1 invested, with internal rates of return exceeding 70 percent."

The major feature in need of revision or repeal is the "Monroney Amendment," which requires, in certain circumstances, that private-sector wage data be imported from outside the local wage area, thereby impairing the concept of locality comparability. Other elements of the federal wage system which we believe need revision include the requirement that the rate paid to federal employees at the second step of a five-step sys-

tem be equal to the average of private-sector rates; the requirement that each grade have five step rates; the prohibition against using state and local government wage data in the survey process; and the requirement to pay uniform, nationwide night shift differentials.

DoD is also monitoring its labor-management relations closely. Since the first government-wide program for formal collective bargaining relationships was implemented under Executive Order 10988 in 1962, labor organizations have gained collective bargaining rights for over 700,000 DoD employees. Some 60 unions now represent appropriated and nonappropriated fund employees in more than 1,500 bargaining units throughout the department.

Since the inception of the program, DoD has recognized that effective labor-management relations are a fundamental and important responsibility of military and civilian managers who administer the civilian work force. In fact, department officials played a major role in formulating proposals leading to enactment of the Federal Service Labor-Management Relations Statute as part of the Civil Service Reform Act. Today as in the past, labor-management relationships within the Department of Defense are basically sound and mutually beneficial. They continue to build on the premise that providing employees with the opportunity to participate in determining their conditions for employment serves the public interest and supports DoD's ability to accomplish its mission.

However, recent developments both within and outside the Department of Defense have threatened to disturb the delicate balance between the statutorily protected right of employees to organize and bargain collectively and the equally compelling mandate that federal officials retain the right to manage, to direct the work force, and to ensure that personnel policies and work practices support effective and efficient operations. Actions taken by DoD to maintain the balance include support of Executive Order 12391 and efforts to reduce the cost of the labor relations process.

"The department has concluded that, in spite of more than two years of implementation efforts, the merit pay system is not achieving all of its objectives."

The executive order, signed by the president on November 4, 1982, provides for partial suspension of labor relations obligations involving U.S. citizens employed overseas. It allows the Secretary of Defense to suspend certain bargaining obligations and dispute-resolution procedures which would substantially impair the ability of U.S. forces to implement treaties and agreements between the United States and host countries.

Our efforts to reduce the escalating cost of the labor relations program include working with other government agencies on several fronts. For example, we have urged the Department of Justice to seek Supreme Court review of a lower court ruling which requires the government to pay the travel and per diem costs of employees serving as union negotiators. That decision, if upheld, will result in payments throughout the government exceeding $1.6 million for expenses incurred between 1979 and 1982 alone. In a related move, we have drawn up a standby legislative proposal that would reduce labor relations costs by making the travel and per diem issue a negotiable item at the level of recognition and by eliminating statutory entitlement of union negotiators to such reimbursement.

Other efforts to contain costs, while maintaining program objectives, include asking the Federal Labor Relations Authority to review carefully its operational procedures under the 1978 statute and consider changes offered by the department that would promote local resolution of unfair labor practice charges and also ensure more efficient and less costly formal processing of cases. We believe that our recommendations, if adopted, would promote the objectives of a more effective and efficient government without undermining the legitimate interests of recognized labor organizations and the employees they represent.

DoD policy and guidance have continually emphasized that our officials must bargain in good faith. However, we have consistently opposed bargaining demands which intrude impermissibly upon management's retained rights in areas such as hiring, selection, work assignments, and direction of the work force. We have actively participated in the negotiability disputes process and, more recently, the judicial review process in an effort to define more clearly the duty to bargain and to delineate prerogatives reserved to management by law. We have, for instance, supported Army and Navy efforts to modify arbitral awards which interfere with DoD's ability to implement government policy on contracting out workload when contracting out is more cost efficient. We have also taken part in several negotiability cases involving union proposals on leave, insurance, and other nonappropriated fund employee benefits that we do not believe are mandatory subjects of bargaining under the labor relations statute.

Major labor relations challenges that we anticipate in 1983 include working out the first comprehensive labor agreement covering our work force in Panama, agreeing on new contracts covering DoD Dependents Schools teaching personnel worldwide, and negotiating cases involving National Guard Bureau policies on wearing the military uniform and on the scope of grievance and appellate procedures for technician personnel.

"While we are unhappy with the current merit pay system, the department still strongly supports the concept of performance-based incentives. In the interests of a more effective pay-for-performance approach to civilian compensation, we have therefore developed and recommended to the Office of Personnel Management a legislative proposal which will correct deficiencies in the current merit pay system."

Effective personnel management, whether it involves labor relations, work force motivation, or productivity enhancement, requires an understanding of how personnel policies and practices affect the DoD labor force. The Office of the Secretary of Defense therefore maintains an active program of research on civilian personnel issues. In addition, the services conduct their own studies through offices such as the Navy Personnel Research and Development Center, the Army Research Institute, and the Air Force Human Resources Laboratory. Among research programs being sponsored by DoD in FY 1983 is application of economic modeling techniques to assess how federal compensation policies and proposed changes to them will affect labor force retention.

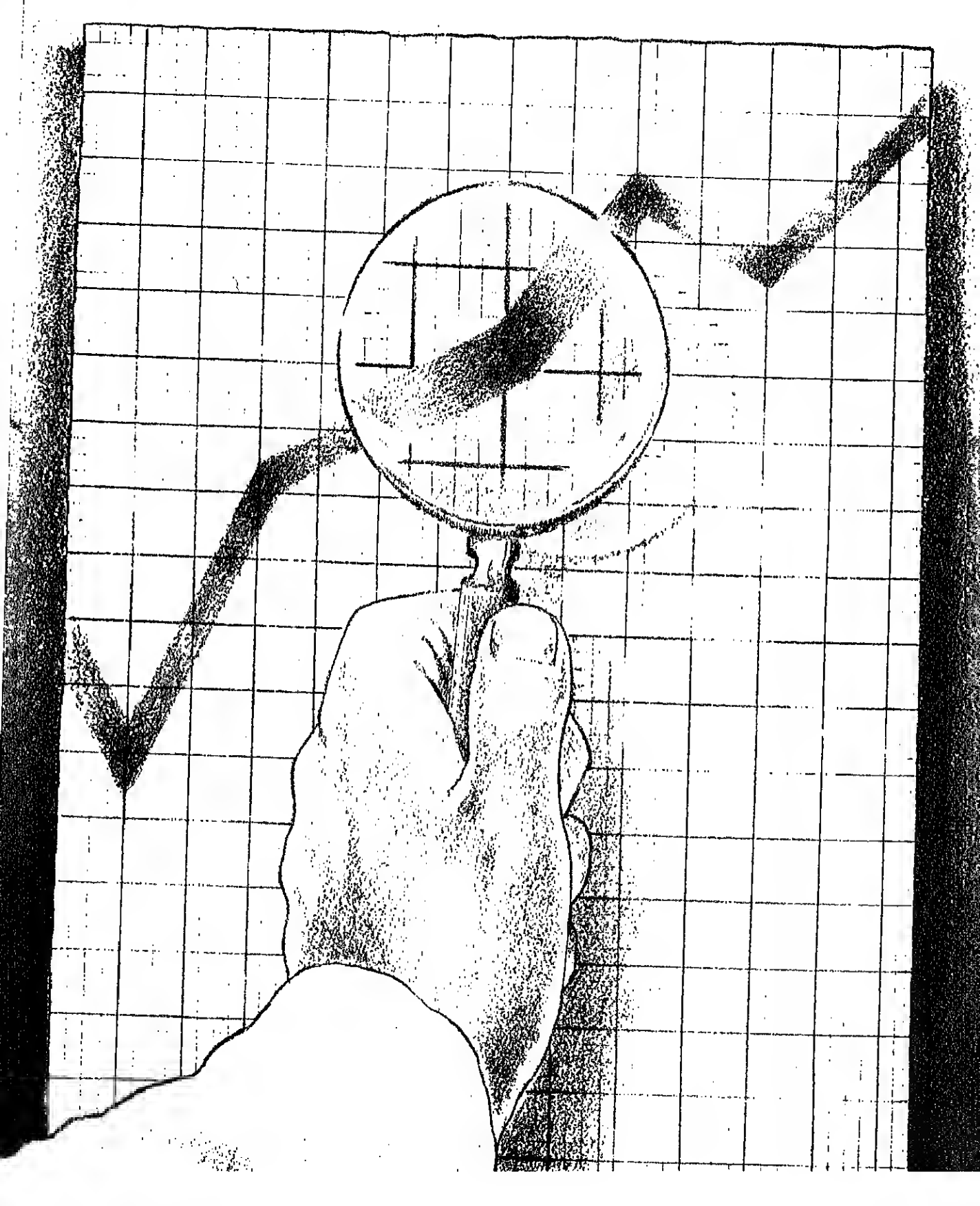
A second research project will evaluate the civilian requirements determination process. It will address questions such as what criteria managers apply in choosing between military and civilian labor for support services and to what extent they consider using capital instead of labor for those same support services. Based on results of this survey of current practices, we will recommend improved methods for establishing and defending civilian employment requirements.

A third project expands on research designed to evaluate and document the cost and effectiveness impacts that result from the A–76 cost study process. This study should give us better insight into why that system produces economies. Initial results suggest that the efficiency review process yields a considerable portion of the savings realized.

The purpose of the research projects I have described thus far is to help us obtain the most effective civilian labor force possible within the funds appropriated by Congress. This objective is as valid in peace as in wartime. A fourth project will assess how well DoD installations are prepared to expand their civilian work force in the event of a military mobilization.

Civilian employees are essential in meeting our responsibility to defend the nation. Through research efforts such as those just described and through the management initiatives outlined earlier, DoD can improve its use of this resource. The challenge to the department in the 1980s is to project accurately and to obtain approval in the budgeting process for the level of civilian employment required to execute our missions; this planning requirement extends to mobilization scenarios as well. We must continue to find more productive methods of accomplishing these jobs and institute incentives and management tools which bring about higher productivity. Defense managers at all levels must meet the challenge of attracting, retaining, and motivating people with the skills and talents that we need in an era of changing personnel policies and compensation systems. Success in achieving these civilian personnel management objectives is an important key to meeting the nation's defense needs. DMJ

LAWRENCE J. KORB is the Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics). Before assuming his present position, Dr. Korb was resident director of defense policy studies at the American Enterprise Institute for Public Policy Research and co-editor of the AEI Foreign Policy and Defense Review. He has also served on the faculties of the U.S. Naval War College, the U.S. Coast Guard Academy, and the University of Dayton. Dr. Korb has written several books and monographs on defense matters and has contributed some sixty articles on national security affairs to books and journals. He holds a bachelor's degree from Athenaeum of Ohio, a master's degree from St. John's University and a doctorate from the State University of New York at Albany.



Efficiency reviews and operational improvements— the key to future effectiveness

By KAREN CLEARY ALDERMAN

DoD's new efficiency review program is expected to enhance greatly the payoff of the traditional approaches to establishing resource requirements.

As part of the Reagan administration's thrust to achieve greater operational economies and efficiencies, the Department of Defense in 1981 directed each of its components to establish a formal system of efficiency reviews of those in-house activities that are not candidates for contracting out under the provisions of OMB Circular A–76. DoD set a resource savings goal of 4 percent to be achieved through this process, which applied to all activities other than combat units designated for deployment,[1] and further declared that the activities which achieved the savings could reapply them to other bona fide requirements. Later defense guidance directed that all in-house activities undergo efficiency reviews.

This efficiency review policy derives from management techniques developed in connection with the A–76 cost study process. It requires DoD components to develop performance work statements which clearly describe the work to be performed as well as the established quality, quantity, and timeliness standards for performance of that work. Using these statements and other job analysis techniques as a base, managers then review their operations and processes in order to identify areas in which improvement is possible.

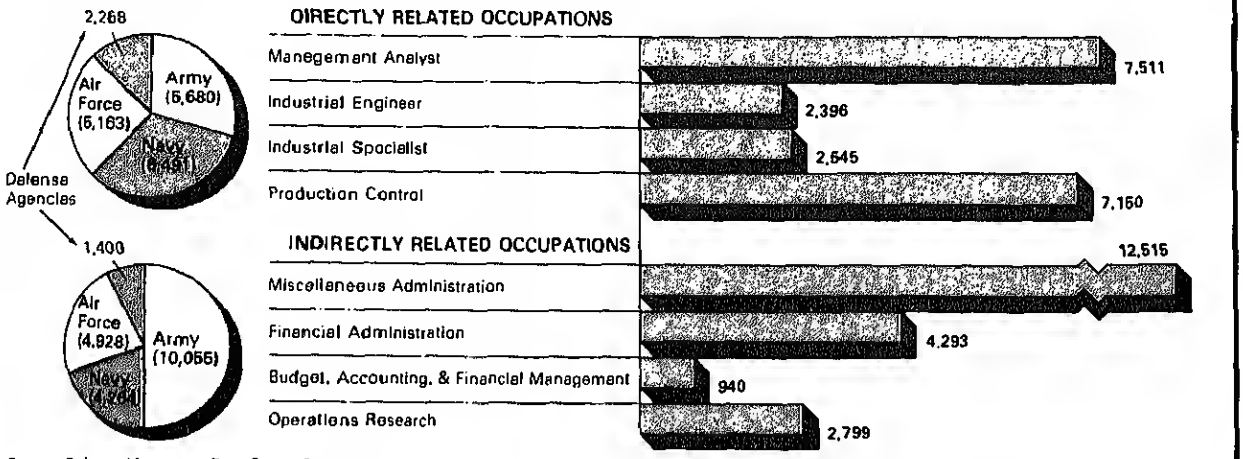
Improvement of operational efficiency is not a new concern to DoD. In point of fact, in the quest for efficiency the department invests more than a billion dollars annually in direct civilian salaries alone. As of December 1981, DoD employed 19,600 management analysts, industrial engineers, industrial specialists, and production control specialists who are typically tasked with determining least costly operational methods. An additional 20,600 personnel, engaged in financial administration, budget and accounting, financial management, and operations research, are tasked with analyzing, budgeting, managing, and auditing operations (see figure, p. 14). Many uniformed personnel also perform similar functions. Moreover, there are numerous discrete programs already under way; in 1981, for example, the Army identified 32 ongoing programs designed to achieve more efficient resource utilization.[2]

Confronted with this enormous investment and the multiplicity of approaches to resource conservation, a skeptical manager might question the particular merits of introducing yet another program. But the efficiency review approach, as con-

[1] *Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) Memorandum, November 27, 1981, subject: Use of Performance Work Statements and Efficiency Reviews.*

[2] *Assistant Secretary of the Army (Installations, Logistics, and Financial Management) Memorandum, February 5, 1982, subject: Use of Performance Work Statements and Efficiency Reviews.*

The Department of Defense invests over $1 billion annually in direct civilian salaries in its quest to manage efficiently. In all, more than 40,000 managers, analysts, auditors, and administrative personnel are involved in securing the least costly operational methods.



Source: Defense Manpower Data Center, December 1982

ceptualized, is not simply one more among many continuing programs to achieve efficiency in DoD. Rather, it serves as an integrating framework for the various other efforts. The efficiency review approach requires development of a performance work statement prior to determining the most efficient organization and method for accomplishing that quality and quantity of work. Thus, the management focus shifts to what is essential to do prior to determining the minimum essentials required to do it. The development of a performance work statement requires an analysis of the work currently being performed to see how the activity is organized and what kind of service it provides. This analysis often raises questions about what the activity is doing and why it is doing it, as well as suggestions for consideration in developing the most efficient method of operation once a statement of work has been completed. Thus, besides fulfilling the critical function of developing standards under which the success of an activity can be measured, performance work statements act as a catalyst for new ideas regarding work performance.

Many established programs to improve work force morale, productivity, and mission effectiveness are integrally related to the efficiency review process. For example, quality circles give workers the opportunity to speak out about the most effective methods for accomplishing the tasks delineated in their performance work statements and to be recognized for their contributions. Suggestion programs can lead to methods refinements and efficiencies that can be derived from productivity-enhancing capital investments. Staffing standards based on performance work statements can provide a baseline for establishing performance-contingent reward systems. It is anticipated that the internal consistency and overall effectiveness of the many tools and methods used to promote higher quality and greater efficiency will be enhanced by establishing performance work statements as the baseline.

Industry parallels. The Department of Defense is not unique in its endorsement of this management technique. In part, the efficiency review program reflects recommendations of the General Accounting Office, which, in a 1981 report, concluded that: ". . . by limiting the efficiency review program to only those commercial activities that can be operated by contractors, DoD has yet to realize a full savings possible from this cost reduction program. The commercial activities that must continue in-house present an important opportunity for additional savings, and the program should be expanded to include these activities."[3]

[3]*General Accounting Office,* Expanding the Efficiency Review Program for Commercial Activities Can Save Millions *(Washington, DC: Government Printing Office, 1981).*

Similarly, the push to achieve cost reductions and productivity improvements has led an increasing number of private-sector business leaders to first ask whether everything they are doing is really necessary, rather than simply struggling to do more quickly and efficiently what has always been done in the past. For instance, both the International Harvester Company and the Cities Services Company require their managers to establish job definitions and standards of performance for individuals, work groups, and departments. These definitions and standards form the foundation for productivity-enhancing changes in staffing, procedures, and capital equipment investments.[4] In addition, the much-touted Westinghouse Productivity and Quality Center has developed a "zero time program" which focuses on the function to be performed in determining the best method of accomplishment within the constraints of available technology. Its value engineering approach stresses product quality while concentrating on reducing processing time through identification and removal of processing bottlenecks.[5]

Evidence regarding what generates efficiency in A–76 studies corroborates the efficacy of the performance work statement concept. Recently Rand Corporation analysts studying the A–76 program evaluated the cost and quality of motor vehicle maintenance at comparable Air Force bases. They found facilities operating under three differing management policies: in-house operations at which A–76 efficiency review procedures had been applied, in-house operations at which no A–76 reviews were performed, and operations at which contractors had been awarded the maintenance operation based on an A–76 review. The Rand analysis indicated that the in-house organizations which had won an A–76 bid achieved the lowest cost-per-mile of operation. The results confirmed that competitive bidding based on performance work statements generates substantial cost savings.[6]

Similarly, the Defense Audit Service reviewed the pest management program at five Army and Navy sites and determined that the commercial activities efficiency review process resulted, on the average, in a 20-percent reduction in work force requirements for this function. With this improvement in their operations, none of the installations converted their pest control function to contract.[7]

Coordinating the effort. The Office of the Secretary of Defense recognizes that it is not enough just to endorse the efficiency review concept and initiate a program. Upon establishing the program, Dr. Lawrence J. Korb, Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics), asked each component to identify its plans, schedules, and resource requirements needed to accomplish the efficiency review program. In response to service requests, he also increased component civilian end strength in FY 1982 by 600 billets to ensure that sufficient personnel were available to implement the efficiency review program.[8]

In September 1982, DoD began formally integrating the efficiency review concept with existing instructions and policies that deal with methods analysis and work measurement programs. In April 1983, a draft DoD instruction entitled "Operational Improvement/Efficiency Reviews and Resource Determination" was transmitted to the services and agencies for comment.

Key policies outlined in the draft instruction require that:

- DoD components operate and manage activities based upon performance requirements and standards.
- DoD components determine the most efficient organization and operating methods through the efficiency review process, which should also consider opportunities for productivity-enhancing capital investment.
- Resource determination be based on labor and

[4]*William A. Ruch and Judith A. Ruch, "White-Collar Productivity: Highlights of the Literature," in* Work in America Institute Studies in Productivity, *No. 23 (New York: Pergamon Press, 1982), pp. 3–4.*

[5]*Defense Productivity Program Office Memorandum for Record, March 29, 1983, subject: Visit to Westinghouse Productivity and Quality Center.*

[6]*Ross M. Stolzenberg and Sandra H. Berry,* A Pilot Study of the Impact of OMB Circular A–76 on Motor Vehicle Maintenance Cost and Quality in the U.S. Air Force *(Santa Monica, CA: Rand Corporation, March 1983), Report Number WD–1845–MRAL.*

[7]*Defense Audit Service,* Report on the Audit of the Department of Defense Pest Management Program Project 258–804, 983, *draft report, pp. 34–35.*

[8]*Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) Memorandum, August 13, 1982, subject: Performance Requirements and Efficiency Reviews.*

Focus on operational improvement

Writing on management, Peter F. Drucker states, "Continuous improvement of productivity is one of management's most important tasks." This statement applies to both the private and public sectors of the United States today. All parts of the private sector must address productivity improvement if they are to remain competitive in a global market. The public sector must seek continual productivity improvement in order to provide essential services at a minimum cost to the public.

To achieve this objective in an environment where there is an increasing demand for funds, public-sector managers must obtain the maximum results from the funds available without diminution of the quality of the services provided. The optimal means of satisfying these requirements is to use available resources more efficiently.

Productivity improvement is of course no small challenge in either the public or private sector. Some motivators for productivity improvement are common to both, while others are quite unique. One of the major differences between the two involves the perception of what constitutes acceptable job performance. In the private sector, one must be productive to stay in business. Thus, the manager who reduces his or her staff while becoming more productive will be rewarded. In the public sector, a reduction in the number of people supervised is often perceived as a reduction in managerial stature.

While this perception is not necessarily factual, it has evidently occurred frequently enough to be considered a common demotivator in actuality. To offset this apparent disincentive, the DoD productivity program guidance mandates that managers be allowed to reapply resources saved in support of high-priority, unresourced workloads. As a further incentive, productivity improvement can be included as one element in a manager's merit pay plan. Such actions provide positive confirmation to the manager that productivity improvement will be rewarded.

To direct managers' focus toward productivity improvement, DoD instituted an efficiency review program in FY 1982. This structured approach to productivity improvement consists of developing a performance work statement and accomplishing an efficiency review. The performance work statement defines specific outputs and the quality level required. The efficiency review is an evaluation of existing staffing standards developed from the most efficient available method of work measurement.

- Operational improvements precede resource determination (in other words, staffing standards should not institutionalize existing operational inefficiencies).

DoD's planning, programming, and budgeting procedures further reinforce the efficiency review program. For example, the annual Defense Guidance establishes resource savings goals for such programs as efficiency reviews, commercial activities studies, and interservice and intraservice support agreements. Moreover, as part of the FY 1984 program objectives memorandum review, the Defense Resources Board adopted a policy that bases final civilian end strength apportionment, in part, on the success of each service and agency in accomplishing its goals. That policy also establishes a special pool of civilian manpower spaces to reward those components which meet or exceed savings goals.

Service reactions. The services and other DoD components have responded positively to the efficiency review program. The Army, for example, has developed an effort entitled the "Army Performance Oriented Review and Standards" program. Managers in this program will coordinate the development of manpower staffing standards from efficiency reviews under the direction of the deputy chief of staff for personnel.

The Army tasked each of its major commands in the continental United States with developing an implementation plan to conduct the efficiency reviews. These components must specify the population and organizational structure of affected activities as well as the structure of the team that will review each activity. All of these commands will initiate the program on October 1, 1983; overseas commands and smaller agencies will begin on October 1, 1984.

To date, all of the Army's major commands have developed their implementation plans, which are presently under review. In addition, standard position descriptions and plans for recruiting the personnel who will carry out the reviews have been developed, manpower resources for the remainder of FY 1983 have been allocated, and appropriate

gram with other programs established to achieve productivity improvement, such as commercial activities, defense retail interservice support, and position management and classification reviews, among others. As of FY 1985, the results of this program will he incorporated into the planning, programming, and budgeting process and the economies, efficiencies and management improvements report system.

The Air Force has integrated the efficiency review process into its management engineering program. Under the direction of the directorate of manpower and organization, deputy chief of staff for manpower and personnel, the Air Force efficiency review process has resulted in the establishment of a new set of procedures that will be used to develop a new generation of manpower staffing standards. An important aspect of this Air Force functional review process is the early identification of functional wartime taskings. This is essential to preclude adoption of peacetime economies that could have an adverse impact on wartime capabilities.

To date, training courses have been developed at the Air Force Management Engineering Agency; further, management engineering personnel from the functional management engineering teams and major air commands have completed training in the review process. Other personnel are scheduled to receive the training over the next several months.

Currently, the Air Force is conducting functional reviews in 20 areas, including audio-visual, transportation, and civilian personnel. In all, over 350 potential productivity enhancements have been identified and will be reviewed during the course of the study efforts. The service has targeted virtually every functional area for review over the next six years.

Based on experience from reviews already in progress, the Air Force has indicated that the full potential of the efficiency review program cannot be realized without the utilization of labor-saving equipment. This finding highlights the importance of the productivity-enhancing capital investment program and the need to integrate existing productivity improvement programs in a cohesive manner.

The Navy, now in the process of completing its inventory and scheduling of efficiency reviews, anticipates completing 20 percent of the program each year for the next five years. The Navy program, which stresses management flexibility for its major commands, is comparatively unstructured. Each command can determine how reviews will be performed, and reviews can be made by individual organizational element or by specific function. The Navy has distrihuted the end strength to perform these reviews among the claimants; FY 1983 efforts focus on guard and firefighter activities that were previously studied under the A–76 program but were barred from conversion to contract by the 1983 DoD Authorization Act. The Navy may also combine its efficiency review program with its other management improvement efforts.

The Marine Corps will concentrate its efforts in two areas. It will study those commercial activity functions that in the past were exempted from cost comparison analyses, and it will spotlight those functions that are essentially governmental or research and development. The Marine Corps is also sponsoring a series of on-site visits to brief activities on all of the management improvement efforts, including efficiency reviews.

The economic conditions facing the U.S. today mandate that the Defense Department manage its funds as prudently and efficiently as possible. Managers must continually question whether everything that they are doing is really necessary to accomplish the missions. They must question if there are better methods. Accordingly, DoD is giving high-level attention to the new efficiency review programs. Carefully managed, these efforts can complement existing programs and have the potential to provide more efficient, economical methods of accomplishing DoD missions, thereby increasing the payoff from fixed funding levels. DMJ

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DoD's capital investment program yields productivity gains

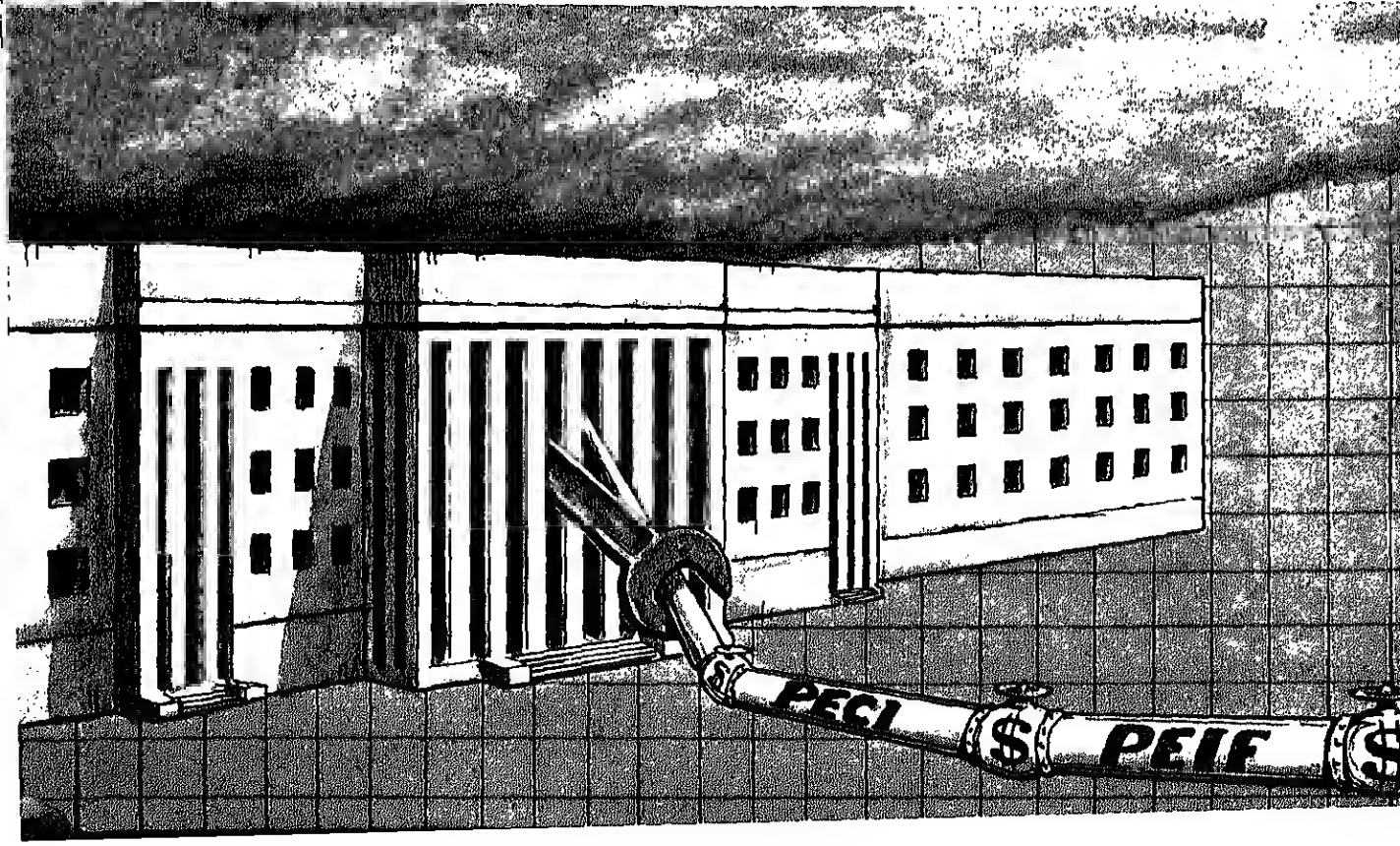
By ROBERT K. ACKARD

Productivity-enhancing capital investments offer managers at all levels an opportunity to get the most out of defense resources.

Sometimes the problem is as simple as an air base having to resort to hand tampers and ready-mix compounds to repair potholes in a runway. Funds are not available to buy a paving machine which could, for an investment of $5,800, save the base almost $5,000 annually. Other problems affect an entire service. Both government auditors and the Congress, for example, criticized the Army for being lax in controlling troop dining facilities. What the service lacked were funds for an automated system which, if implemented, could both check patron eligibility and at the same time provide follow-on accounting.

Similar problems occur daily at all levels and in

ILLUSTRATION BY DAVID ERICKSON



all activities throughout the Department of Defense. Fortunately, DoD now has a program to help solve them. Through the productivity-enhancing capital investment program, the department sets aside funds in its annual budget and makes them available to managers and personnel for a wide range of cost- and labor-saving investments. This program takes a unique and innovative approach to productivity improvement by offering all DoD employees, military and civilian, an opportunity to translate their ideas for doing things more productively into concrete actions.

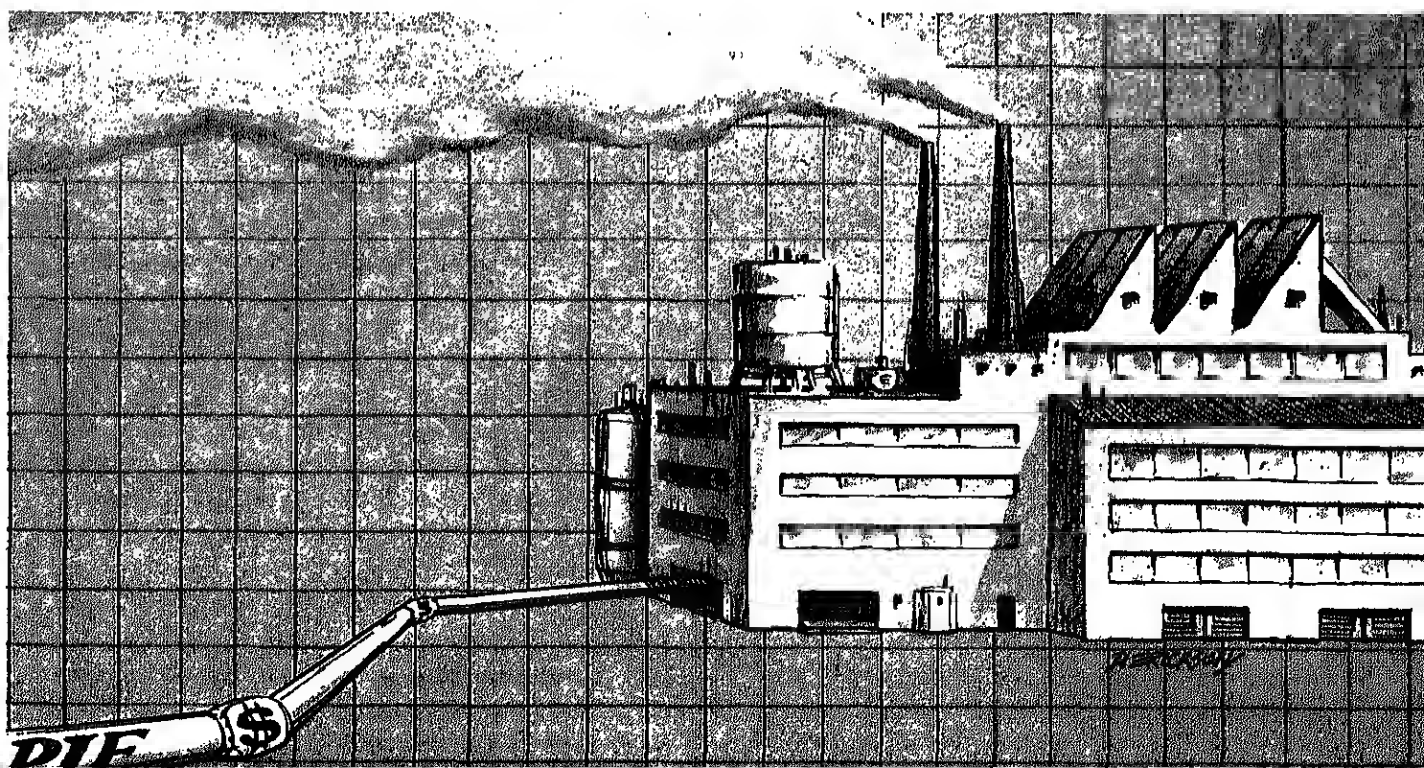
The program has resulted in many improvements that make routine work easier and more productive, thereby obtaining better returns on defense resources. Savings realized help alleviate personnel and dollar shortfalls and free assets for reemployment elsewhere. The Air Force runway repairers now have a paving machine, and the Army is investing in an automated head-counting system which will save $371 million, a return of 22 to 1 on its $16.7 million, four-year investment.

Why the need to establish set-aside funds for productivity enhancements? Unfortunately, given budget priorities, few DoD managers receive enough money to meet even short-term requirements, let alone funding for investment opportunities that offer savings and high returns downstream. However attractive, such opportunities are frequently deferred in favor of more "glamorous" technologies or more pressing requirements such as developing capabilities for newly assigned missions.[1]

The effect of these repeated deferments has been a steady deterioration of our in-house technology base. For example, a 1980 survey of metal cutting and forming equipment at DoD maintenance activities indicated that 60 percent of the machinery evaluated was at least 20 years old. One purpose of the productivity-enhancing capital investment program is to offset such trends.

Other developments in the workplace also point to the need for such a program. The last several

[1] *See "Analysis of Productivity-Enhancing Capital Investment Opportunities," Special Report Number 4, one of five special reports prepared in support of the work done under the Joint Civil Service Commission, General Accounting Office, and Office of Management and Budget study concerned with measuring and increasing productivity in the federal government, September 1973, pp. 26–27.*



relatively low cost, computer-aided processes affecting a broad range of support functions and an increase in the automation of office and administrative functions. Insufficient resources to take full advantage of these technologies have hampered DoD's ability to reduce the high labor content required to perform operations and to employ its personnel in the most effective manner. Even when the department has successfully identified and established a requirement for capital improvements, the length of the multiyear planning, programming, and budgeting cycle has often resulted in semi-obsolescence of high-tech items even before they are acquired and installed. To some degree, this lag parallels the private sector's failure to maintain capital-labor ratios, which has been cited as a major contributor to America's slowdown in productivity growth over the past 15 years.[2]

Likewise underscoring the importance of funding productivity improvements are the support costs of modern weaponry. Because these sophisticated weapons require equally sophisticated repair and maintenance systems, DoD's operations and maintenance budgets are projected to continue growing over the next five years. Unfortunately, backlogs of deferred maintenance projects are expected to grow even faster, and the failure to exploit opportunities for productivity improvement will result in higher outlays and reduced readiness over the long term.

Unfinanced improvements

The extent of our unfinanced productivity investments is unknown. However, several indicators suggest that the potential for improvement, through capital-labor substitution, is significant at all organizational levels. To illustrate, the Defense Department was able to fund only $1 of every $6 of investment opportunities from the candidates submitted for productivity investment funding for FY 1984. The projected rate of return on those projects that were approved was $14 for every $1 of investment costs, with an expected internal rate of return of almost 80 percent; this level is well above the acceptable limit for cost-effective capital

[2]*"Productivity Perspectives—1981," Annual Report, American Productivity Center, Houston, TX, 1981, p. 12.*

Rand Corporation and by service and defense agencies indicate that many opportunities never surface because managers believe that if funding is not available, the detailed justification effort accompanying a funding request will be an exercise in futility.

In addition, capital rationing often restricts an activity's submission of investment proposals to a fixed-dollar amount. One activity, for example, identified investment requirements that exceeded $2 million annually. The activity manager was informed by his command, however, that due to budget limitations, only $250,000 in proposed investments would be available for that year. Since these funds covered normal replacements as well as any productivity initiatives, efforts to identify additional opportunities or to plan for long-range productivity improvements appeared futile.

DoD's focus on productivity improvement and its use of capital investments to achieve that objective dates from the early 1970s, when the services initiated prototype funding efforts to finance productivity enhancements. In 1973, for instance, recognizing the need to accelerate project approval cycles for opportune investments, the Department of the Army set aside omnibus funds to finance productivity-enhancing capital investments in its government-owned, contractor-operated ammunition plants.[3] The limited funds available were restricted to small-dollar, fast-payback investments (those that could return costs within three years). The Department of the Air Force experimented with a similar program during 1974–75, and both programs were outstanding successes. Army, for example, realized returns nearly four times as high as its original investment costs. Both activity managers and the Congress reacted very favorably to these initial efforts.

Encouraged by these successes and prompted by a growing recognition of the need to promote productivity initiatives DoD-wide, the secretary of defense established a formal DoD productivity program in 1975.[4] It addresses three major aspects

[3]*U.S. Army Management Engineering Training Agency,* Improving Federal Agency Productivity Enhancing Capital Investment Programs, *Rock Island, IL, June 1975, p. 9.*

[4]*Department of Defense Directive 5010.31, "Productivity Enhancement, Measurement, and Evaluation—Policies and Responsibilities," August 4, 1975.*

of productivity—measurement, enhancement, and evaluation—and requires the services and defense agencies to aggressively seek out and finance productivity-enhancing capital investments. The Defense Productivity Program Office oversees the productivity-enhancing capital investments program, also initiated in 1975 in keeping with the newly established policy; this program includes productivity-enhancing incentive funds, productivity investment funds, and component-sponsored investments.

A network of productivity offices in each of the services and defense agencies, with counterparts at major command levels, carries out the productivity-enhancing capital investment program. The Defense Productivity Program Office provides program oversight and technical support. Each service and agency has its own operating procedures to process investment proposals and funding, as set forth in Army Regulation 5–4; Secretary of the Navy Instruction 5200.31A, with more precise guidance given in command issuances; and Air Force Regulation 25–3. Defense agencies participating in the program have issued similar guidance.

How managers benefit

Although all agree on the need to reduce costs and improve productivity, most managers and workers face more immediate needs. The productivity-enhancing capital investment program provides a unique response to this general restraint and to some specific disincentives to productivity such as arbitrary resource cuts or supervisory grade structures based on organizational staffing. These latter disincentives often penalize sound personnel management decisions.

Wherever possible, under the productivity-enhancing capital investment program, project originators are permitted to retain project savings and reapply them to authorized, established requirements for additional dollars or personnel. Follow-up later assures that managers have in fact reallocated savings as planned. As a result of this incentive feature, forward-thinking managers recognize productivity-enhancing capital investments as a viable means of coping with reduced budgets and staffing shortfalls. In his statement to the Congress on February 8, 1982, Secretary of Defense Caspar Weinberger acknowledged the need for "continuing productivity improvements to realize the full efficiency of the Defense work force," and referred to the productivity-enhancing capital investment program as a major initiative to "release resources for higher priority workloads."

Virtually all DoD investments contribute to efficiency to some degree. A distinguishing characteristic of productivity-enhancing capital investments is that, by definition, their *primary* intent is to improve the output-to-resource-input relationship. Program guidance limits these investments to projects that return costs within four years from date of operation (two years for fast-payback or productivity-enhancing investment funds) and to proven, off-the-shelf technologies readily available with little or no testing or development. They can include almost anything that is, by definition, an investment.

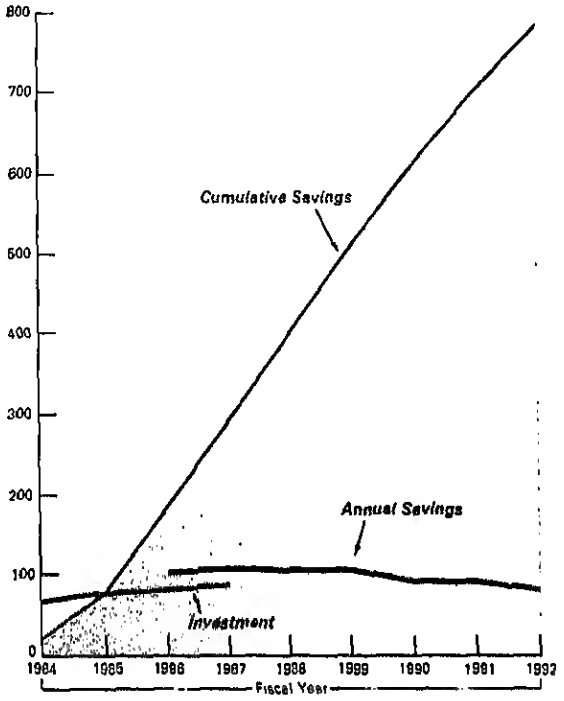
Within some funding categories, project costs may not exceed a specified amount; Congress, for example, limits productivity-enhancing incentive funds to projects costing less than $100,000. Overall, however, the productivity-enhancing capital investment program's scope can extend to command-wide projects and even to department-wide major system improvement efforts. All types of activities at all organizational levels, including staff offices of the Office of the Secretary of Defense, can initiate investment projects. Funding covers equipment and tools for maintenance and supply activities, troop support organizations, command-wide office automation, computer-aided design and manufacturing, medical functions and, in many cases, such simple tools as asphalt pavers or automotive lifts for motor pools.

As initially established, the program was less ambitious, a fast-payback strategy focusing on small investments (less than $100,000) that could return costs within two years. When the General Accounting Office and the Office of Management and Budget reviewed this early version, now a subset of the overall program, their findings reaffirmed the value of productivity-enhancing capital investment concepts.[5] In fact, based on these reviews,

[5]*General Accounting Office,* Full Potential to Achieve Savings by Investing in Fast Payback Productivity Enhancing Capital Equipment Not Realized, *Report Number FGMSD-78-44 (Washington, DC: Government Printing Office, July 29, 1978), p. 10.*

Figure 1. Cost-benefit trends of DoD productivity investments

Some $782 million in savings are expected by FY 1992 as a result of productivity funds invested in select projects between FY 1984 and FY 1987.



OMB concluded that a new strategy was needed to finance larger, long-term investments if significant productivity gains were to be achieved in major functions such as supply, procurement, maintenance, and base operating support.

In 1981, therefore, DoD established the productivity investment fund, setting aside funds within the five-year defense program for these major investment initiatives. The fund specifically reserves its financing for major (over $100,000), selected productivity-enhancing investments with long-term potential. Typical projects funded include machine tools, office automation systems, energy distribution systems, and construction of facilities.

Over the four-year history of the fund, the Office of the Secretary of Defense has initiated several projects. In FY 1981 and FY 1982, for example, it funded the transportation operational personal property standard system, a $22.7 million investment expected to save about $103 million annually by automating the management of personal property shipments DoD-wide. Included in FY 1983 and FY 1984 productivity investment fund requests is LOGMARS, a DoD-wide effort to improve material tracking and inventory through use of machine-readable bar codes. It is expected to return its $67 million investment cost during the first full year of operation; savings over the lifetime of the equipment are projected at $780 million. In all, the FY 1984 Defense budget provides $129 million for productivity investment funds.

Collectively, the productivity-enhancing investment fund, the productivity investment fund, and the component-sponsored investment fund, which is typically directed toward service productivity goals or priorities, constitute a comprehensive strategy for financing productivity improvement initiatives at all levels within DoD. Although funding levels have not been sufficient to meet all new investment opportunities, the payoff from what has been funded is enormous. Each year, due to improved screening, better projects are being approved. Thus, the average internal rate of return for productivity investment fund projects has increased from about 25 percent in FY 1981 to almost 80 percent (projected) in FY 1984. Figure 1 shows cost-benefit trends for all projects selected for FY 1984.

In some areas the program has come full circle. Until FY 1983, for example, DoD's industrially funded activities participated in the productivity-enhancing capital investment program in the same manner as did appropriation-budgeted activities. An asset capitalization program established since then, however, permits managers of industrially funded activities to purchase equipment or make repairs without going through the planning, programming, and budgeting system process. Such activities now operate on a basis similar to that in the private sector, using operating capital to pay expenses and buy material and equipment and then recovering these costs by charging customers for work performed. The asset capitalization program complements the productivity-enhancing capital investment program, and the two provide great flexibility in financing productivity-enhancing technologies in our support functions.

The productivity-enhancing capital investment strategy fits well into DoD's overall efforts to im-

prove efficiency. Although only one of many initiatives within the department's larger productivity program, it, like those other initiatives, is interdependent and synergistic, as an example will illustrate. For years, the Defense Department has maintained a program to review, improve, and measure work methods and procedures. Recently, it integrated these efforts into a directed program to review the efficiency of all DoD activities; using operational analysis techniques, these reviews precisely define work and quality requirements in all functions and document these requirements in performance work statements. The purpose of the program is to eliminate nonproductive functions and improve unit costs; a logical outcome is identification of technology-enhancing opportunities which require productivity-enhancing capital investment. The program also extends application of technologies developed through the manufacturing technology program and value engineering to our in-house activities, particularly in the complex weapons system maintenance arena.

The productivity-enhancing capital investment strategy is an integral part of overall DoD investment policies and planning, and each service and defense agency incorporates the philosophy into its efforts to achieve organizational and management change. The individual programs depend, in some degree, on the service's or agency's assessment of its investment needs and on its budget priorities in other areas. Although not all approach the productivity-enhancing capital investment program with the same fervor, in many cases it provides the single avenue for capturing opportunities within the program and budget cycle and for implementing long-range system changes.

Program operation

As part of the yearly defense guidance, the secretary of defense issues specific instructions for establishing productivity-enhancing capital investment funds. This guidance sets the level of productivity investment funds for the budget year and directs each service and defense agency to include productivity-enhancing incentive funds and component-sponsored investment funding in its budget. This latter funding is usually aligned with the individual service's or defense agency's productivity goals and investment plans.

Productivity-enhancing incentive fund programs carry a different name in each of the services—"quick return on investment" in the Army, "fast payback capital investments" in the Air Force, and "productivity enhancements" in the Navy. At its own discretion, each service establishes the program as a level of funding, which represents its best estimate of the investment cost of fast-payback projects expected during the budget year. The amount budgeted becomes a request for seed money from Congress to support productivity-enhancing investment fund projects identified within the year. In this way, funds are available to finance quick-return projects immediately, and savings are realized within the normal appropriation cycle—savings that might otherwise have been lost during that two-year period.

On average, the services target a 60-day turnaround time for the submission-through-approval cycle. Although approval processes vary slightly, an individual or organization usually submits a proposal to the next-highest level of command, with approval authority delegated no higher than the major command level. A typical project such as an Army brush removal machine is approved at the major command level. At the end of the year, the services report the results of their investments to the Office of the Secretary of Defense for consolidation into a report to the defense secretary and to Congress. Congress also requires the services to report the results of any post-investment reviews and audits.

The process of selecting and financing productivity investment fund projects is very different from that used for the small-dollar productivity-enhancing investment fund projects. The former investments follow the same established planning, programming, and budgeting process—with two notable exceptions—as do other capital items. The first exception is that the Office of the Secretary sets the program funding level for these projects in the annual five-year defense program update. To date, this level has been sustained at approximately $100 million in FY 1981 dollars, adjusted for inflation. Service secretaries and agency directors then submit candidates for these funds; candidates must meet all existing regulatory and policy guidance for investments of their type.

In the case of a typical productivity investment fund project such as service-sponsored automated graphics equipment, the organization responsible for approving data processing initiatives in that service must screen the proposal. Because it will involve a particular category of procurement money, program and budget analysts for that area must also clear the project. In addition, DoD guidance requires an economic analysis, using established project justification techniques, that considers all alternatives to the proposal. All levels of command review this analysis, and the service productivity-enhancing capital investment program office conducts a final review before submitting the project to the Office of the Secretary of Defense.

Once submitted to that office, a project undergoes review and analysis by the Defense Productivity Program Office—the second exception to normal budgeting processes for productivity investment fund projects. Working with project justification data, analysts then compute various economic factors used to array projects in rank order for selection. The ranking process considers both the discounted and undiscounted cost benefit trend of each project as well as its expected impact on utilization of manpower resources.

To supplement the economic ranking process, the Office of the Secretary also does an assessment of management desirability. Staff offices review each project for functional alignment with established goals and for compliance with investment management requirements; if a project is acceptable to functional managers, it is included in the final productivity investment fund decision processes. Project selection proceeds, on the basis of economic merit, until the budget is exhausted.

Once the Office of the Secretary has approved a proposal, it informs the sponsoring service or defense agency, through program decision documents, to include requests for funds in its annual budget submission. Since projects may be for either equipment or facilities, funds may come from procurement, military construction, or operations and maintenance appropriations. If the benefiting installation is a research lab or test facility, funding may, as required by law, involve research and engineering program elements.

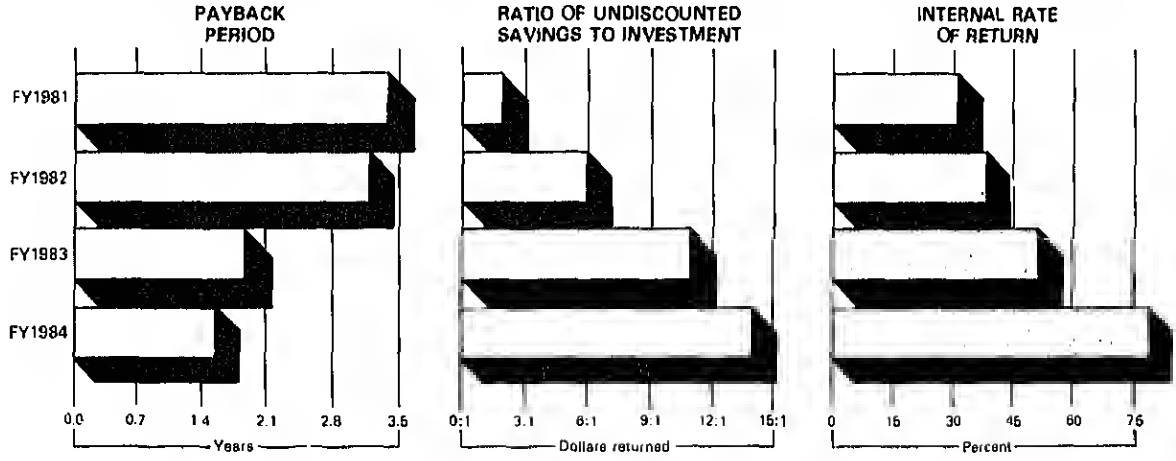
As with all productivity-enhancing capital investment projects, each service and defense agency must provide post-investment accountability for approved projects. Moreover, an activity may not reprogram funds, except to similar projects, unless it receives approval from the Office of the Secretary of Defense. Once projects are operating, they are subject to independent post-investment appraisal and to normal audits throughout the course of their payback periods. As savings are achieved, an activity must document them in budget estimates either as direct reductions or as factors considered in developing dollar and personnel requirements.

Unfunded investment opportunities

Current budgets permit funding of only the very highest return projects under the productivity-enhancing capital investment program. In 1982, both the Army and the Air Force actually exhausted their productivity-enhancing incentive fund appropriations in mid-year, creating a significant backlog of projects for financing in 1983. Yet audits of productivity-enhancing investment fund projects to date indicate that more than 95 percent have either met or exceeded original expectations for savings. Moreover, as Figure 2 shows, use of improved selection techniques in deciding which projects to fund has been highly successful; the expected rates of return on productivity investment fund projects, for example, have increased rapidly. First financed in FY 1981, these projects are now coming on-line and their validated savings are being documented. But in selecting productivity investment fund projects for FY 1984, DoD could only fund about $1 of every $6 of investment opportunities. Despite projected lifetime savings of more than $1.5 billion, total productivity-enhancing capital investment program allocation now stands at $178 million, less than one-tenth of one percent of defense expenditures.

Although the program is an accepted productivity enhancement technique, DoD has been unable to translate its success and potential for savings in sufficient detail to gain full understanding and acceptance by the Congress. As recently as 1983, congressional concern over the program's growth resulted in a reduction of about $26 million in funding requests, or 22 percent of the total. The significant growth that year probably reflected the combined effects of program maturation and greater awareness on the part of first-line and middle man-

return, payback periods are rapidly decreasing and the ratio of savings to investment costs is dramatically increasing.



agers of the program's ability to address their resource shortfalls. Due to funding limitations, DoD may have to forego more than $250 million in potential savings over the next eight years.

Rapid growth has also resulted in problems in transmitting program guidance and direction to the operating levels. Consequently, savings from investments at these levels have not always been documented in a manner that adequately establishes the program's credibility. In response to a 1982 Defense Audit Service report highlighting this fact, the services have recently issued guidance to correct these problems.

Efforts to improve productivity in DoD continue to gain momentum and are likely to exert even more pressure for an increase in productivity-enhancing capital investments. Increasingly, for example, managers are recognizing the need to reduce overhead or support costs through the application of emerging office automation and information processing technologies. Research and development efforts to improve weapons support and logistics will also require greater technological investments by both defense contractors and DoD in-house activities. In addition, the department's economy and efficiency programs are fostering an understanding of the interrelationship between these functional initiatives and other management improvement priorities such as energy conservation, equipment upgrades, and facility modernization. The productivity-enhancing capital investment program has made major contributions in these areas and will do so in the future as well.

A key to the success of the program is its flexibility—it offers an approach that personnel at all levels can use. The program challenges managers, supervisors, and workers alike to be innovative, to express ideas, and to make recommendations. Perhaps most importantly, program participants share in the rewards that improved productivity brings. DMJ

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Motivating DoD's work force to be more productive

By ANTHONY L. DeMARCO

As is reflected in the diverse activities that make up its work force motivation program, the Defense Department believes that worker-oriented efforts are critical to improving productivity in DoD.

Productivity is the spark plug of the American way of life. Of late, however, commentators have suggested that our engine needs a tune-up in order to maintain America's position in the world economy. Consequently, productivity enhancement is receiving considerable attention in both the public and private sectors, including the Department of Defense. In 1975, for example, DoD formally established the Defense Productivity Program in order to bring productivity considerations into the mainstream of defense management.

The strategies to improve productivity within DoD are similar to those employed in the private sector. Government and industry alike recognize that technology alone cannot guarantee success; indeed, employee performance, largely determined by ability and motivation, is also critical. As such, this article will focus on factors affecting the motivation of today's work force and, given that context, consider ongoing efforts within DoD to motivate its employees and involve them in productivity enhancement.

In many ways, the DoD work force reflects the same needs and desires as the population at large, and American workers strongly desire to participate in management decisions which affect their jobs. When they cannot, their dissatisfaction often results in lower productivity, however anomalous this may seem at a time when wages and fringe benefits are at an all-time high and modern equipment has removed much of the tedium from the workplace. Yet the decline in the nation's rate of productivity improvement speaks for itself. During the past several years, the U.S. has had the lowest productivity growth rate of any major industrial nation, and reversal of this trend will require the cooperation and active involvement of every segment of the work force.

To elicit that cooperation and support, managers in both government and industry must recognize that major changes have taken place in the American work force over the past 30 years. Among them are a decline in agricultural employment, a greater proportion of the labor force employed in service industries, an increase in white-collar workers, and more women and young people in the work force. The increase in young workers represents perhaps the most dramatic change, one that will be felt increasingly in the Defense Department in years to come.[1]

The educational background of these young people has been a major stimulus to change in the basic structure of the current work force. Workers today are better-educated—one out of every four has a college education—and thus less likely to be intimidated than previous generations. Moreover, they are part of an affluent society which has instant means of communications, personal mobility, and a widespread distrust of authority. Meaningful work has become a birthright, not a privilege, and quality of work life is a very real issue.[2] Consequently, organizations must design jobs which are flexible, enriching, and rewarding.

Also, keeping pace with the rapid technological advances that characterize the work environment today requires a creative, innovative work force. Organizations that neglect their human resources by not main-

[1] *John R. Hinrichs,* The Motivation Crisis *(New York: American Management Association, 1974), pp. 9–10.*

[2] *Hinrichs, op. cit., p. V.*

taining and upgrading skills will find their key manpower resources rapidly becoming obsolete.[3] And they are less likely to realize fully the gains in efficiency and productivity that the new technology can yield.

At the same time, managers need to be aware that these advances present employees with a dilemma. On the one hand, workers have opportunities to expand their professional horizons both for their own benefit and for that of the organization. On the other hand, many employees perceive the new technologies as a threat and consequently experience change-related stress and insecurity.[4] Such concerns can detract from performance and productivity, and managers must address them in motivating the employees affected.

In 1979, the U.S. Chamber of Commerce sponsored a comprehensive survey of worker attitudes toward work, productivity, and a wide range of employment conditions that influence attitudes and performance. The results of this survey, contained in a report published in 1980, have important implications for motivating employees. Highlights include the following:

- Workers are optimistic about the ability of the United States to improve productivity and performance and expressed a willingness to work with management to achieve this end.
- Workers believe that they would work harder and do a better job if they were more involved in making decisions that affect their work (see Figure 1).
- Workers suggested that recognition of their efforts, in the form of better jobs, financial rewards, or both, would enhance motivation.
- An overwhelming majority of workers are concerned about the performance of their organizations.

Activities designed to improve quality of work life—quality circles, job design, and group incentive plans, for example—respond to many of these concerns. A recent New York Stock Exchange study of corporate human resource programs concluded that such activities, while gaining momentum, are still in the developmental stage.[5] Stock Exchange analysts sampled the approximately 49,000 U.S. corporations with 100 or more employees; those firms employ about 41 million people, or 55 percent of all private, nonagricultural workers. Results showed that only 14 percent of these corporations have human resource programs to stimulate productivity. However, researchers found that human resource programs received good marks for improving productivity and lowering costs and that their effectiveness should increase with experience.

Recognizing the importance of its human resources, the Department of Defense has set up a work force motivation program to address worker needs and at the same time assist employees in channeling their creative energies toward attaining organizational goals and enhancing productivity. Work force motivation within DoD includes a broad spectrum of specific service- and agency-directed initiatives employing both behavioral science and management analysis techniques. Included under this broad umbrella are such diverse strategies as organizational effectiveness, job enrichment, quality circles, and productivity-based incentive pay systems (shared gains).

Organizational effectiveness encompasses a wide range of techniques deriving from the theory and practice of applied behavioral science. Its underlying premise is that the more organizations learn about their structures, processes, and contexts, the more effective they can be. The military has been applying organizational effectiveness techniques since the early 1970s to help personnel achieve their maximum performance potential. The purpose of the various service programs is to increase combat readiness; all place strong emphasis on making the chain of command more cohesive.

The Army uses a decentralized approach. It permanently assigns consultants in pairs to major Army units and installations, where they apply techniques such as team-building, goal-setting, and survey-guided development. More than 350 full-time Army consultants are now working in the field; those selected for training as consultants are line officers (captains and majors) who, in most cases, have advanced degrees in behavioral science or management.

The Navy bases its organizational effectiveness program, called human resources management, on survey-guided development. Navy consultants use a survey to gather information on command climate, including communications flow and decision-making; supervisory and peer leadership; work group processes; and other aspects of the organization surveyed. Five consulting centers, with detachments throughout the world, work directly for the fleet commanders. Centers are normally collocated with the fleet's home port, so that the consultants can conduct the program while the ships are in port. Approximately 700 Navy people are involved full-time in the program; consultants selected for training are usually experienced line officers (lieutenant through commander) and senior noncommissioned officers with outstanding records and recent operational experience.

Organizational effectiveness within the Air Force is

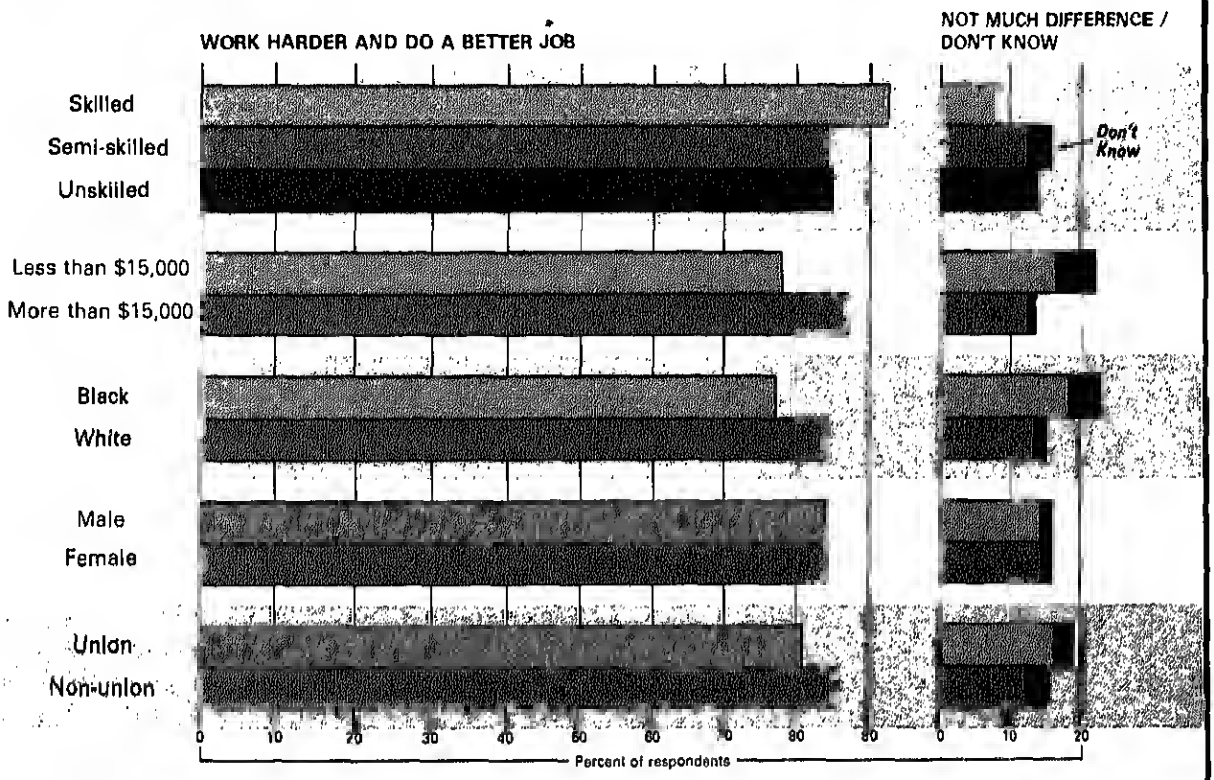
[3] *Hinrichs, op. cit., p. 15.*

[4] *Arnold F. Kanarick, "Employee 'Task Teams' Set the Stage for New Technology at Honeywell, Inc.,"* World of Work Report, *January 1983, p. 1.*

[5] *"People and Productivity: Excerpts from a Study by the New York Stock Exchange," Productivity Brief 21, American Productivity Center, Houston, TX, January 1983.*

Figure 1. How workers feel about being involved in decision-making

The vast majority of U.S. workers polled in 1979 expressed a willingness to work harder and do their best on the job, but they also stressed the importance of recognition, rewards, and involvement in the decision-making process.



Source: Workers' Attitudes Toward Productivity, U.S. Chamber of Commerce, 1980

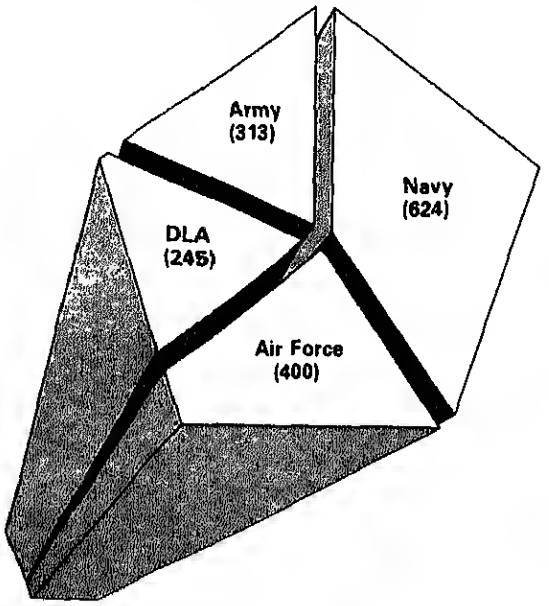
part of a system known as the organizational assessment package. The Air Force's Leadership and Management Development Center uses this package at all organizational levels to assist commanders and functional managers in identifying leadership and management concerns. The process involves five major steps: data gathering, computer-assisted analysis, feedback to all levels of leadership, training and formulation of action plans to resolve problems, and follow-up and measurement of changes. The focus is on improving leadership skills. Both commissioned and noncommissioned officers adjudged successful leaders are trained as consultants.

The concept of job enrichment, like organizational effectiveness, borrows from the behavioral sciences. It operates on the premise that attempts to motivate workers must appeal to their highest order of need—self-fulfillment. It recognizes that jobs can be designed to develop the potential of workers and assumes that motivation, the potential for development, the capacity for assuming responsibility, and the readiness to direct behavior towards organizational goals are all present in people. Management cannot put them there but has the responsibility to establish an environment that encourages people to recognize and develop these characteristics for themselves.[6] Job enrichment usually involves developing jobs that increase worker responsibilities, thereby allowing them to satisfy their need for self-fulfillment and at the same time reach their maximum level of performance.

Another widely applied motivational technique is a form of participative problem-solving known as quality circles, an adaptation of a technique that proved highly successful in Japan. The quality circle consists of a small group of employees (usually five to fifteen) from the same work area, led by their first-level supervisor, who meet regularly on a voluntary basis during normal working hours to identify and analyze problems or conditions associated with their work. Following their analysis, the

[6] *Donald Sanzotta,* Motivational Theories and Applications for Managers *(New York: American Management Association, 1977), p. 21.*

Figure 2. A breakdown of the 1,582 quality circles among the services and the Defense Logistics Agency



group proposes a solution and recommends corrective action to management. Implicit in the quality circles concept is recognition that productivity improvements come about not only from technological change but also from increased employee involvement.

The Norfolk Naval Shipyard in Virginia inaugurated the first quality circle program in DoD in 1979, and there are now more than 1,500 circles throughout the Defense Department, a number that is likely to continue growing (see Figure 2). Quality circles have generated tangible and intangible improvements in both worker morale and productivity. Tangible results, judged on a broad scale of return on investment in training and time devoted to problem-solving, have ranged from $4 to $28 for each $1 invested. Intangible benefits have included a greater sense of dedication and job satisfaction among the work force.

A third motivational technique used in DoD, still in the experimental stage but showing considerable promise, is performance-based incentive systems, which provide cash awards to employees who exceed preestablished standards of performance. In appropriate work situations, such systems can improve productivity markedly. Both the Navy and the Army are currently conducting performance-based incentive experiments at selected activities under programs known as the performance-contingent reward system and productivity gain sharing, respectively.

The cash awards paid out in these experiments are a share of the savings realized when measured output exceeds established performance standards. The maximum sharing rate within Navy can be as high as 50 percent; the individual activity establishes the exact percentage. The set sharing rate within Army is 50 percent.

The Navy conducted its first successful performance-contingent reward experiment in the data processing center at the Long Beach Naval Shipyard in California. The participating employees were Navy civilian data entry operators. Production standards were based upon the level of difficulty of the documents processed, and during a 12-month trial period production improved substantially. The gain in productivity, about 50 percent, resulted in a net cash savings of $34,000, a reduction in overtime of 77 percent, and near elimination of an existing backlog. A cost-benefit analysis at the Long Beach site showed recovery of program set-up costs within the first three months of operation.

Following this initial success, the Navy has continued to experiment with such systems in production activities involving boiler repair and engine mechanics at shipyards and air rework facilities. These experiments have yielded results similar to those of the data entry project. During FY 1982, 377 employees received incentive awards totaling $130,000; total dollar benefits to the Navy amounted to $448,000.

The Army's Missile Command, Depot System Command, and Armament, Munitions, and Chemical Command are currently conducting a number of productivity gain-sharing experiments in a broad range of functions at eight Army installations. The functions include data entry, finance and accounting, and supply and maintenance; the experiments, initiated in July 1982, will conclude on September 30, 1983. Mid-term review at the six installations in the Depot System Command showed an increase of 11 percent in overall performance efficiency and a savings of 51,000 staff-hours. The amount paid out to employees for the period was $273,000. The Army also reports that work force morale has improved and that use of overtime and sick leave have declined significantly. Sacramento Army Depot, for example, reduced overtime by 6 percent.

Beginning on September 12, 1982, the Air Force also began testing a performance-based incentive system, involving 44 data transcribers, in the comptroller's office at McClelland Air Logistics Center in California. During the first 21 weeks of the one-year pilot program, incentive payments totaled $6,400, paid at a sharing rate of 20 percent. Savings to the Air Force for the same

Risk-taking and earning rewards in federal employment

By DAVID R. LAMPE

Some 80 federal and civil-sector executives met in Harpers Ferry for three days to discuss the Office of Personnel Management's plans to refine certain provisions of the Civil Service Reform Act of 1978.

At the request of the U.S. Office of Personnel Management, approximately 80 senior federal executives, scholars, business leaders, and representatives from professional associations gathered in Harpers Ferry, West Virginia, on June 15, 16, and 17 for a conference on "Risk-taking and Earning Rewards in Federal Employment." The purpose of the conference was to assess progress in implementing the Civil Service Reform Act of 1978 and to discuss future directions for civil service reform. OPM plans to consider issues raised and recommendations made by the participants in preparing its report to the Congress next year on the effectiveness of the act in meeting legislative goals.

Donald Devine, director of the Office of Personnel Management, delivered the keynote address, and three other speakers—Bernard Rosen, formerly executive director of the U.S. Civil Service Commission and director of personnel for the State Department, Patrick Korten, OPM's executive assistant director for policy and communications, and Tom Diaz, columnist and Supreme Court reporter for the *Washington Times*—also gave their views on the 1978 reforms. The remainder of the conference consisted of concurrent panels and workshops, one series on each of the following subjects: improvements to the Senior Executive Service, performance management, employee relations and appeals, and areas for future civil service reform. Topics discussed included streamlining and simplifying employee appeals procedures, extending merit pay provisions to all eighteen grades of the general schedule, and splitting the general schedule into a clerical and technical track, whose pay would be based on that for similar jobs in the local labor market, and a professional and managerial track, whose salaries would be based on the national labor market for those occupations. This report will highlight some of the deliberations on these and other matters taken up at the conference.

In his opening remarks, Dr. Devine pointed out that the nation's federalist founders not only did not subscribe to the philosophy of a riskless civil service but in fact explicitly rejected it. He praised the Civil Service Reform Act of 1978 as "a great step forward" in assuring that federal workers who take risks receive rewards for doing so. Whereas formerly 98 percent of all civil servants got the same performance rating, there is now a more equitable distribution over at least three categories, according to Devine, who also noted that the Reagan administration deserves credit for increasing the federal pay cap by 35 percent. Because the government has no bottom line, the OPM director stated, it needs effective performance appraisal even more than private industry.

Bernard Rosen, now distinguished adjunct professor in residence at American University, commented on specific aspects of the 1978 reforms. He cited seven important positive elements of the act, among them, clear identification of merit principles and prohibited personnel practices, statutory emphasis on performance appraisal, and sufficient flexibility to experiment with different personnel practices. Professor Rosen also called attention to prominent features that are having an adverse impact on the performance and productivity of the federal work force; in particular, he singled out problems with the Senior Executive Service and with the structure of the Office of Personnel Management itself.

For example, Rosen criticized the sweeping powers accorded political appointees to penalize members of the SES, given that little evidence supports the need for such powers. In granting them, according to Rosen, the act introduced enormous uncertainty into the lives of career executives precisely at a point where effective performance is critical—namely, in the individual's relations with his or her political bosses. As a result, morale in the SES has plummeted, the former Civil Service Commission director charged, and a brain drain is inevitable.

Professor Rosen pointed to results of a 1983 survey, taken by the Federal Executive Institute Alumni Association, which indicate that only 19 percent of the government's senior ex-

John Fossum, Assistant Director for Performance Management, Office of Personnel Management, delivers a summary report at the Harpers Ferry conference.

PHOTO BY TONY JACKSON—OPM

George Nesterchuk
Official Personal Reporter

ecutives believe that the SES development program is working successfully in their agency. In another survey, conducted by the Merit Systems Protection Board, only 9 percent of GS-13s through GS-15s said they would join the SES ranks, even to take a job they would like to have.

"The conclusion appears inescapable," Rosen stated, "that the Senior Executive Service, . . . as presently constituted, is working at cross purposes to the nation's need for highly motivated, well-trained, and competent career executives. . . ." He called for removal of the threat of arbitrary action under which career executives now work and for restoration of tenure rights. He also advocated that only designated positions in the Senior Executive Service be available to political appointees.

Rosen has concluded that a restructuring of the Office of Personnel Management is likewise in order. As set up under the 1978 reform act, Professor Rosen charged, the central personnel management agency is incapable of giving the necessary priority to the foremost merit principle—hiring and promoting the most capable people. "During both the Carter and Reagan administrations," he said, "the premier merit principle has been breached repeatedly by actions and inaction of OPM directors that adversely affected open competition and competitive examining."

Carter's OPM director, in Rosen's view, did not defend the professional and administrative career examination vigorously enough, and Reagan's is pursuing an alternative too slowly, having cut by 50 percent the research staff responsible for developing one. In general, Rosen contends, Reagan's appointee has reduced staffing levels at the agency far below what is needed to carry out its mission.

Rosen offered the OPM record on schedule C appointments as further evidence of the erosion of merit principles. Carter's director increased the number of positions in schedule C by more than 50 percent—to approximately 1,560—and Reagan's has already exceeded that number by 100. Yet in the 4½ years since enactment of the reform act, OPM has conducted no desk audits of schedule C positions to determine whether they were appropriately exempted from competition. The net result, Rosen said, has been a significant increase in political and personal patronage.

OPM's Patrick Korten took a less dim view of the reform act. He praised it for recognizing that the civil service, instituted in 1883 to remedy the spoils system, had itself introduced new abuses, and he pointed to a growing sentiment among the American public that government was no longer as responsive as it once was. While acknowledging that the act was a political compromise fraught with ambiguity and sometimes at cross purposes, Korten maintained that its innovations in the area of accountability were needed. He cited, for example, a 1979 survey which reported that only 50 percent of federal workers felt they would be held accountable for poor performance.

Personnel is a management function that must be responsive to the president if he is to carry out his job effectively, according to Korten, and the 1978 Civil Service Reform Act provided that in setting up the Office of Personnel Management. He accused Bernard Rosen of nostalgia for a past when the civil service was beyond the reach of political influence. "We have gone too far down the road to turn back;" he stated, "only refinements to the act are needed."

In his remarks to the conference, Tom Diaz also assessed the success of recent civil service reforms. He labeled the Civil Service Reform Act a misnomer, charging that it had reformed very little. He characterized it as a "cynical distillation of political hype . . . that has poisoned chances for real reform for perhaps the next 25 years." After reviewing political events of the Carter era that culminated in the legislation, Diaz described the salient changes wrought by the act as:

- Granting federal employee unions statutory recognition for the first time.
- Creating the Senior Executive Service, "a priesthood of our very own," which he claimed, however, is not an elite cadre, is not subject to high risks, and is not eligible for high rewards.

Asserting that the act was "a victim of political expediency," Diaz said that it in fact added to the "filigree of employee protection" already in place and, moreover, used lawyers' solutions to correct managers' problems. In some circles, according to the journalist, it is referred to as the "Civil Service Lawyers Relief Act."

Diaz concluded with some advice concerning future civil service reforms. Increasingly, he observed, federal employees are aligning themselves with special interest groups in an attempt to block certain changes to civil service benefits. He cautioned against the dangers in playing that game unless one holds many cards and is a very good player. In the face of what Diaz termed "truly frightening budget deficits," Congress will have to make some difficult choices, and civil servants are harming themselves by stonewalling on issues such as retirement and the pay comparability formula.

During the panels and workshops on Thursday and Friday, conference participants considered the merits of these viewpoints and other issues related to risk-taking and earning rewards in federal employment. The point of departure for the four groups were papers prepared and delivered by authors whom OPM had commissioned to write on the subjects. Excerpts from those papers, plus selected comments made by other participants, follow.

In "The Senior Executive Service: Options for Change," Dr. Toni Marzotto, an associate professor of political science at Towson State University, examined "some of the more problematic aspects of the SES" and explored options for improving the system. Her paper focused on three areas of concern in particular: the performance appraisal process, executive pay and performance bonuses, and the size of the SES (currently, there are 6,873 actual members and some 8,211 positions allocated). Reducing the size of the senior executive corps and restructuring it, Marzotto suggested, "might go a long way toward improving the quality of the SES as well as alleviating some of the current problems."

The emphasis that the 1978 reform act placed on performance appraisal for the SES was especially important, Marzotto stated in her paper, because "it was . . . seen as a way of increasing both formal accountability and the responsiveness

of career executives to changes in agency policies following a change in administration." Before the SES was established, federal executives were not appraised on a regular or systematic basis. Case studies conducted by OPM indicated that "when performance was evaluated at all, the evaluation was generally limited to a cursory review of personal traits rather than individual and organizational accomplishments."

A principal benefit of the performance appraisal process mandated by the act, Marzotto noted, was that "executives sat down with their supervisors to discuss objectives and establish agreed-upon measures, many for the first time. Even now many executives will admit that the process is still useful." A related benefit, according to one of the conference participants, is that it has helped executives confront their subordinates directly, that is, to "look them in the eye" and tell them where their work is good or bad and why. In addition, this person went on to say, senior careerists have become more comfortable in realizing that while a professional judgment is necessarily subjective, one's level of experience and competence make that judgment, within the human scheme of things, as objective as it can be.

Professor Marzotto reported that SES performance appraisal has been less successful in linking individual performance with organizational goals, one of its major purposes: "In large part this has not happened. . . ." She explained that the size of the executive corps is one reason: "Some jobs currently placed in the SES are so far down the organizational hierarchy that it is pretentious to force a linkage."

A "persistent irritation" mentioned in the paper is the actual performance ratings themselves, especially the linkage between ratings and bonuses. Executives contend that the ratings do not accurately measure their performance and are driven by the need to give out a specific number of bonuses. Marzotto speculated that the problem simply may be not enough rating levels to make fine distinctions. She mentioned two other options for improving linkage—forced distribution of ratings and a more direct and automatic linkage between appraisals and bonuses—but admitted that the problem with both is that results tend to drive appraisals. Requiring appraisers to rank the people within their pool as well as to rate them, as the military does, was an alternative offered by one of the participants.

The issues in the Senior Executive Service which have been the source of the most discussion and dissatisfaction, according to Professor Marzotto, are executive pay and performance bonuses. "The problems," she acknowledged, "are as much outside the system as they are within it." Despite all the data indicating that federal executives are paid far less than their private-sector counterparts, "it is folly," in Marzotto's words, "to think that Congress or the public would agree to anything approaching full comparability for federal executives."

Beyond the political realities is the more fundamental issue of determining what true comparability is, even if it could be achieved. Not only do many government executives lack private-sector counterparts, but salary for executives in the private sector is often only one component of a total compensation package that includes such items as stock options, expense accounts, and company cars.

Complicating the compensation issue further is the make-up of the Senior Executive Service. Citing a recent Grace Commission report, Dr. Marzotto maintained, "One could argue . . . that the scope of responsibility within the SES is so divergent that many individuals in the SES are not true executives." Moreover, absent the bottom line of profitability, objectively determining when an executive really deserves a pay increase is difficult.

Marzotto's paper discusses several options for improving executive compensation beyond the obvious one of increasing pay significantly and removing the pay cap; these include:

- Establishing nonmonetary benefits such as expanded use of sabbaticals, increased annual leave, and reassignment to positions with greater responsibility or broader scope of responsibility.
- Requiring that the Commission on Executive, Legislative, and Judicial Salaries report more frequently, thereby possibly encouraging Congress to adjust executive salaries more regularly; its reports now appear every four years.
- Insuring a better spread between ES 1 and ES 6 salaries by requiring that a given percentage difference, perhaps 10 or 15, be maintained between SES pay rates.

The last option would enable agency heads to use pay rates meaningfully to reward top performers and to motivate poor performers to do better. Marzotto's paper cites evidence that the pay cap and subsequent pay compression have created more dissatisfaction and discontent than the salaries themselves. Moreover, she observed, many executives in the SES "are uncomfortable with a gradeless system in which there are still large differences in scope of responsibility but no 'real' differences in salary."

Marzotto pointed to performance bonuses as perhaps the single greatest source of dissatisfaction and controversy. Much of this she attributed to "an overselling of the bonus provision in the hopes of getting most if not all of the eligible supergrades to convert to the new system." When Congress limited the number of eligible bonus recipients, originally set at 50 percent of all SES positions, to 25 percent and OPM further reduced it to 20 percent, "the outcry from unhappy SES members was almost universal," Marzotto said, and given the small amount of the awards and the controversy that often accompanies selection of recipients, some have come to view bonuses as demotivators rather than motivators.

An alternative, now receiving serious consideration, is establishing a bonus pool that would place no limit on the number of executives who could receive a bonus, only on the total amount of money awarded. As Professor Marzotto remarked, this option would give agency heads the flexibility to determine whether a few top performers get large bonuses or whether a greater number of equally good performers receive smaller amounts. It would also easily accommodate group awards for team work or special executive task forces, now often difficult to make without using up the entire 20 percent quota of awards available.

Professor Marzotto concluded her paper by presenting the case for a smaller Senior Executive Service. Size has attracted less attention than the problems outlined above, she admitted, but she maintained that it cuts across all of them and could do much to alleviate them as well. The Grace Commission was the first to question publicly the size of the SES, rec-

of the possible advantages of a smaller corps:

- Congress might be less reluctant to increase executive salaries and to maintain greater variation among pay rates.
- Both Congress and the public would perhaps more readily accept changes in the magnitude of bonuses and the number of recipients.
- Many individuals now unhappy with the distribution of bonuses are in fact not serving in key leadership positions and might be less resentful that top-echelon executives in an agency usually receive the bonuses.
- Concern over the lack of linkage between performance standards and organizational goals may actually derive from the current make-up of the SES—many individuals being appraised are nominally in SES ranks but in fact are functioning in operating positions that do not have organizational responsibilities.

During the discussion of Professor Marzotto's paper that followed, a panelist noted that a recent survey of SES members in one large DoD component revealed that 40 percent do not consider themselves executives or managers, nor do they want to be.

In his summary report at the end of the conference, the chairman of the SES sessions indicated that, overall, his group believed that the SES is working well and is a good system. Participants in those sessions, he said, tended to view favorably the idea of a ranking system for purposes of awards and recommended consideration of such proposals as flexible schedules for members of the SES; accrued annual leave beyond 240 hours, with a periodic cashout provision; and more money for burdensome relocation expenses. They also saw a need for greater emphasis on training and development for incumbents, more effective interface with political appointees, and greater participation by top management in transmitting agency mission throughout the organizational structure.

For the conference sessions on performance management, Dr. Richard E. Kopelman, professor of management at Baruch College of the City University of New York, prepared a paper on "Judgmental Merit Reward Systems and Job Performance: Theories, Facts, and Practice." In it, he synopsized an extensive theoretical and practical literature which overwhelmingly favors merit as the basis for managing performance and distributing rewards within an organization. Dr. Kopelman also offered some specific suggestions, derived from that same body of literature, pertaining to practical implementation of a judgmental merit reward system.

Organizations can take one of three approaches in distributing their resources, Professor Kopelman noted: nepotism (who you know, not what you know), across-the-board payments (everyone gets the same), and merit allocations (let the best person win). From the first approach, obviously, one can expect a high level of political behavior from workers. The second, Kopelman argued, "represents an efficient recipe for organizational decline and degradation: it should virtually ensure a low organization-wide average level of motivation; and it should prompt turnover among the most competent, high-performing employees." Under the third approach, based on ployees are most likely to be productive.

Dr. Kopelman drew upon the expectancy theory, perhaps the predominant theory of work motivation today, to explain why merit systems encourage productivity. Simply put, expectancy theory holds that the greater a person's expectations that expenditure of effort will lead to rewards—and the more highly he values the rewards obtainable—the greater will be that person's motivation to work hard. By contrast, in organizations where rewards are largely unrelated to job performance, Kopelman pointed out, most employees can be expected to exhibit little work motivation, and the most productive workers will tend to be the least satisfied and most likely to quit.

Consistent with this theory, empirical research confirms the effectiveness of output-based merit reward systems in yielding high productivity. Professor Kopelman summarized the findings of several recent surveys of such research, one of which showed increases in productivity ranging from 29 to 63 percent after switching from a time-based to an output-based pay plan; another found average output increases of 30 percent. On the other hand, Kopelman remarked, "it is not surprising to find numerous case studies and reports of lethargy and inefficiency in public-sector organizations—organizations that typically have opted for the across-the-board approach to reward distribution."

Dr. Kopelman acknowledged that "although most of the empirical research to date on reward systems has focused on output-based pay plans (in comparison to time-based pay plans), the majority of workers today do not produce countable outputs." In fact, jobs that produce and distribute information and ideas account for approximately 50 percent of the gross national product. Because it is difficult to measure performance on such jobs in terms of units produced, Kopelman conceded, "the use of judgment is inescapable in measuring the performance of most of today's workers." Yet he maintained that one can assess the robustness of a judgmental merit reward system in a relatively objective way, that is, by computing correlations, across individuals, between rated performance scores and various organizational rewards, for example, salary level, pay increase, and job title.

In the final section of his paper, Professor Kopelman offered several suggestions pertaining to practical implementation of a judgmental merit reward system. "Without exception," he noted, the ideas advanced "have obtained the imprimatur of evidentiary support." Briefly, he recommended that:

- Managers ensure a strong correlation between rated job performance and the various rewards distributed by the organization; such a correlation is not possible, however, if all employees receive the same rating or the same level of rewards.
- Organizations assure that substantial differences exist in the range of benefits actually provided, if pay or other incentives are to foster improved performance; pay increases ranging from 5 percent for low performers to 7 percent for high performers, for example, are probably too small to affect motivation.
- The motivational system both reward good performance

and take rewards away for poor performance. "If good performance merely leads to token increases in rewards while poor performance is ignored," Kopelman explained, "many people will conclude that it pays to do as little work as possible."

- Good performance be defined in terms of reasonably demanding standards; Kopelman noted that "a considerable body of research (more than 100 studies) attests to the positive effects of setting difficult as compared to easy performance goals."
- Managers use valid measures of job performance—"if deficient, excessive, or irrelevant performance measures are used, the results will be dysfunctional."
- The performance measurement process be structured to minimize rater errors and biases—leniency, for example; features that can minimize such threats to accuracy include provisions for ratings by multiple raters; use of rating forms that focus on specific, observable, overt behaviors rather than vague performance dimensions such as attitude, initiative, or leadership; and incorporation of specific performance goals.
- The rating process include some form of systematic control for evaluation inflation; one way to do so, Kopelman suggested, is to convert ratings to peer-comparison rankings, under which half of all employees will be above average and half below. While he cautioned that "ranking should *not* be used to provide employees feedback about their job performance (or for developmental purposes in general)," Kopelman asserted that "there is much to commend them in connection with making administrative decisions (e.g., raises, promotions, layoffs)."

Comments on Professor Kopelman's paper in the panel sessions generally supported his thesis that financial incentives constitute the single most effective way of improving productivity. One individual, for example, called attention to the value of money as a symbol of purchasing power and as an index of relative success. Participants also qualified and elaborated upon Kopelman's thesis. One senior federal executive referred to a survey recently completed by the Department of Transportation which shows that lower-level managers tend to be more motivated by money than do GS–15s and above.

Several others stressed that a valid performance appraisal system, uniformly and fairly applied, is critical to employee acceptance of performance-based pay. Merit pay does not and has not worked well, it was noted, if there is mistrust between employees and managers, as a recent National Highway Transportation Safety Administration survey bore out. The current perception among public employees, according to one participant, is that pay and performance appraisal operate almost independently of one another.

In reporting back to the conference as a whole, the performance management group recommended further research on and experiments with forced distribution of ratings in the public sector, including the use of ranking in conjunction with rating as a means of quality control. It also emphasized the need to build trust in and managerial ownership of the performance appraisal system if it is to be effective. Other measures proposed for OPM's consideration included extending merit pay provisions to all grades of the general schedule; eliminating within-grade steps and instead providing fewer, broader ranges of bands of pay; and a streamlined appellate process for dealing with poor performers.

Appellate procedures were of primary concern to the group which discussed employee relations and appeals, the subject of the third series of concurrent sessions held during the three-day conference. Dr. Michael Levin, a professor of philosophy at City College of New York, prepared the keynote paper for these meetings, taking as his theme "Rights to Public Employment." Professor Levin's purpose was to "suggest that difficulties in terminating unsatisfactory employees which remain despite attempts at civil service reform are due primarily to deeper currents running through the legal system." Specifically, he pointed to the alleged doctrine of ownership of jobs by employees, which in his words "has come charging out of the courts in the last decade," as the source of many of the problems in this area.

In defining that doctrine, Levin said, the courts "repudiated the traditional at-will doctrine, succinctly stated a century ago in *Payne v. Western and A.R.R. Railroad:* contractual obligations aside, an employer may fire an employee for 'good cause, no cause, or even for cause morally wrong'." Upholding rights to employment in the public sector, according to Dr. Levin, is even more dubious than in the private sector. "The salaries of public servants are gathered coercively, by taxation, from the public they serve," he argued. "If anyone has 'rights' in the matter of public employment, it is the public which has a right to the public employee's best performance."

Professor Levin characterized the concept of job ownership, public or private, as "nonsense, although explaining why puts advocates of at-will in the awkward position of having to defend what is too obvious to need defending." He suggested that the concept derives from the mistaken assumption that a person's need for something somehow creates a right to it. The doctrine leaps from an individual's failure to do as much as he can for someone to the conclusion that he has actually harmed that person. In other words, failure to give a beggar a dime (or to keep someone in one's employ) amounts to harming him because one has not done as much as he could have for the beggar (or erstwhile employee).

Though Levin maintained that public-sector managers "have no obligation to be solicitous of their subordinates' 'rights,' and have a very heavy obligation to promote efficiency," he did not object to some sort of appeals procedure within the civil service. A secretary should not be fired, he allowed, for bringing a balky water cooler to the attention of his or her supervisor. However, here too, Levin found legal pressures working to "deform any public sector appeals procedure," thereby making it difficult "for agencies to get rid of troublesome or incompetent employees."

When an appeals procedure such as the one created by the 1978 Civil Service Reform Act is perceived as institutionalizing employee rights rather than efficiency or morale, according to Levin, it becomes a shield for all employees, competent and incompetent alike. Moreover, Professor Levin went on to say, "rigid appeals procedures for termination, complicated by the 'case law' precedents created by past decisions, lend themselves to one especially insidious type of abuse. . . . A real pro at procedural in-fighting can confront his supervisor

can extend for years."

A further impediment to terminating unsatisfactory employees, in Levin's view, is the belief that "due process" and "equal protection" in effect confer a general right—rather than quite specific procedural guarantees--to contest any government action whatsoever. He remarked that "the hands of the legislators who drafted the Civil Service Reform Act were forced by court decisions, laws, and regulatory fiats which in turn reflect changes in constitutional interpretation and the moral outlook of society." Thus, he concluded, "the situation cannot be altered without a fundamental reappraisal of the notion of positive rights. Such reappraisals being notoriously painful, it will not do to expect one soon."

More specific criticisms of the complaint and appeal systems set up under the Civil Service Reform Act of 1978 emerged during the discussions that followed Professor Levin's paper. Referring to the new procedures as "cumbersome," one participant elaborated as follows:

- The act created a system that allows an employee to pursue various issues arising from a single incident via several avenues.
- The adjudicating agency's decision in resolving a dispute is not necessarily final.
- In certain cases, one adjudicating agency may review the decision handed down by another; the Special Panel resolves disagreements between them.

In addition, participants noted, new adjudicating agencies have come into being and access to existing ones has been expanded. Thus the Office of Personnel Management and the Merit Systems Protection Board, with its Office of the Special Counsel, now divide the functions of the former Civil Service Commission between them. A third agency, the newly established Federal Labor Relations Authority, now oversees and provides leadership in establishing labor-management policies.

What's more, discussants charged, the jurisdiction of adjudicating agencies overlaps a great deal. And in spite of legal and regulatory restrictions on choice of procedures, employees still try to process the same issues under a variety of procedures or to couch the same issues in slightly different terms. Management, it was pointed out, can only attempt to persuade an adjudicating agency that it lacks jurisdiction in a matter; it cannot otherwise prevent unlawful dual processing. Among other deficiencies cited during these sessions were:

- Lack of timeliness in processing cases.
- Complicated, confusing, costly, and time-consuming cases.
- Too many agencies and levels of review.
- Too many choices for employees, leading to attempts to manipulate the system.

In the interests of streamlining current systems, the group's recommendations, as reported by its chairman, included:

- A reduction in the number of levels of appeal and overall simplification of existing procedures.
- A 3-step review process within an agency in cases involving non-removal actions and no appeal beyond this process.
- Elimination of the unnecessary and wasteful full panoply

A streamlined system would be easier for employees to understand and use, it was suggested, and would also give them the benefit of timely, final administrative decisions. Current appellate procedures involve, at most, 5 percent of the federal work force but consume more than 5 percent of personnel resources, according to the group's spokesman.

The fourth group that met during these three days considered areas for future civil service reform. Dr. Thomas H. Kiefer, formerly an associate professor of political science at Shepherd College and now a position classification specialist with the Department of Labor, wrote the paper for these sessions. Entitled "The Federal Civil Service: Areas for Future Reform," the paper suggested "further reforms which might take place as a logical and politically realistic extension of the Civil Service Reform Act of 1978." It addressed three areas: pay, benefits, and public employee unions.

A basic premise of Dr. Kiefer's remarks was that civil service reform has taken place "not because, or not primarily because, a given system was suddenly discovered to be bad, but because the system ceased to serve important social, economic, and political goals, i.e., the needs of individuals and groups as expressed through the political process." Changes to the rules and procedures under which the government manages its personnel system, according to Kiefer, represent a compromise among contending ideas and values in the cultural, political, and economic spheres. Given the nature of compromise, "reform is likely to be marginal, differing only incrementally from the status quo," he stressed, and "should be structured so that it is not an all-or-nothing situation."

The Civil Service Reform Act of 1978 did in fact reflect widespread popular sentiment, in Dr. Kiefer's opinion, that the career bureaucracy must be responsive to politically or administratively competent leadership. Specifically, the act recognized "that a system instituted to remedy the shortcomings of the spoils system had, itself, become a cause of waste, inefficiency, and a contributory factor to the growing public distrust of government." Moreover, he suggested that it could herald "a much more extensive, far-reaching, and long-term reform effort" and proceeded to indicate the direction that effort might take.

On the question of setting federal pay, Dr. Kiefer echoed a comment made by several others at the conference: "The current Professional, Administrative, Technical, and Clerical survey is indefensible." As did other participants, he mentioned the possibility of including salaries paid by smaller firms, state and local governments, and nonprofit organizations in the survey, thereby weighting it more accurately for purposes of comparability.

In fact, those modifications were one of the proposals submitted by this group for further assessment and analysis by OPM. In Kiefer's estimate, however, the best course of action would be pay based on a market-relatedness test that determined supply and demand for given mixes of knowledges, skills, and abilities. Proper pay under such a system would be whatever is needed for the government to be competitive, that is, to attract people qualified to accomplish its work.

Regardless of which pay-setting mechanism the government uses, Dr. Kiefer insisted, the basis for adjusting federal pay should be a total compensation package, one that identifies and includes the cost of all employee benefits. In the absence of a comprehensive approach to compensation, comparability is meaningless, Kiefer argued. Furthermore, he believes that such an approach offers important advantages:

- It would allow the government to control benefit costs in the same way it now controls pay.
- By establishing a specific gross benefit level, perhaps a percentage of annual pay, for which employees are eligible, and defining the costs of the various benefits available, it would make possible a choice-based benefits system. In other words, employees could choose that mix of benefits best suited to their needs up to the limit set. (As one federal executive noted later, however, a major drawback is that an eclectic or "cafeteria-style" approach to benefits drives up administrative costs.)

Kiefer himself admitted: "Benefit reforms such as these would be very difficult to implement because of the complexity and political sensitivity of many benefit issues."

For public employee unions, Dr. Kiefer advocated a "positive" role in the following "important" areas:

- Serving as a source of expertise for employees and, as appropriate, acting on their behalf in exercising appeal and grievance rights.
- Articulating federal employees' interests to decision-makers and serving as a spokesman to the public on behalf of those interests.
- Participating with management in planning, implementing, and evaluating innovations intended to improve employee productivity or satisfaction, for instance, day-care centers, quality circles, or flexible work schedules.

He maintained that pay and benefits "must be excluded from collective bargaining because of their budgetary impact." Effective operation of merit principles, he added, put selection, promotion, performance evaluation, and discipline beyond the scope of collective bargaining as well.

Dr. Kiefer concluded his paper with an urgent appeal for scientifically rigorous policy research in public personnel administration. He alleged that "the evaluation of the Civil Service Reform Act has been greatly hindered because serious methodological questions have not been asked about these studies, especially those done by outside contractors." He said, "It is important to recognize that there are serious flaws in much of the work being done. . . ."

Also, Kiefer called for methodologically sound research into the extent to which the support of career employees is necessary to ensure the success of reforms such as the reduction-in-force and performance management changes proposed by OPM. As Professor Rosen did in his speech, Dr. Kiefer expressed concern over OPM's "lack of action" in sponsoring the research programs and demonstration projects authorized under Title VI of the 1978 reform act. "Finally," he stated, "if we are going to use the private sector as a model, as groups like the Grace Commission are doing, we need to explore more thoroughly the differences between the public and private sectors. . . ."

Participants in the panel and workshops on future civil service reforms offered a number of specific, pointed observations, especially concerning benefits and pay. "The glory days for benefits," as one senior federal executive put it, "are over." If Congress patterns retirement benefits after typical private-sector practices, it was suggested that the following changes would occur:

- Gradually decreasing benefits for those retiring before age 65.
- Average high 5 years of salary instead of average high 3 as the basis for determining a retiree's pension.
- An actuarial basis for survivors' pensions.
- A cost-of-living adjustment amounting to 33 percent of the consumer price index for retirees under the age of 62; 70 percent for those older than 62.

Other likely targets for cutbacks, according to one federal personnel director, include health benefits, annual leave (perhaps an increase in the length of service needed to qualify for current accrual rates), and pay retention provisions in cases of involuntary downgrades.

The former director of compensation and benefits for a major manufacturing firm told the group that the trend in private industry is also toward austerity and tighter control over fringe benefits. High on its agenda, he indicated, is reducing health benefits, which now usually start at a much higher level than they do in the federal sector. He said that the private sector is also getting away from basing pensions on the employee's salary for his or her last year of work.

Of more far-reaching consequence is the likelihood, in this executive's estimate, that industry will move from a defined benefit to a defined contribution pension structure. In other words, an employee's pension at retirement would be based on the amount of contributions, plus interest, accumulated on his behalf during his working years.

Such a defined contribution pension plan for new federal employees was among the proposals for further study offered by the chairman of this group at the end of the conference. Others were:

- Locality-based pay for clerical and technical federal employees.
- Fewer but broader within-grade pay ranges—perhaps 40–60 percent instead of the current 30 percent.
- A comparability base that includes the salaries of state and local government workers and employees of nonprofit organizations.
- An actuarial reduction to the pension of those federal workers retiring before age 65.
- An occupational pay schedule for civil servants rather than the current general schedule.

Details on these and other topics discussed at the conference will be available in proceedings to be published by the Office of Personnel Management. For information, contact Liz Mautner at (202) 632-5340. DMJ

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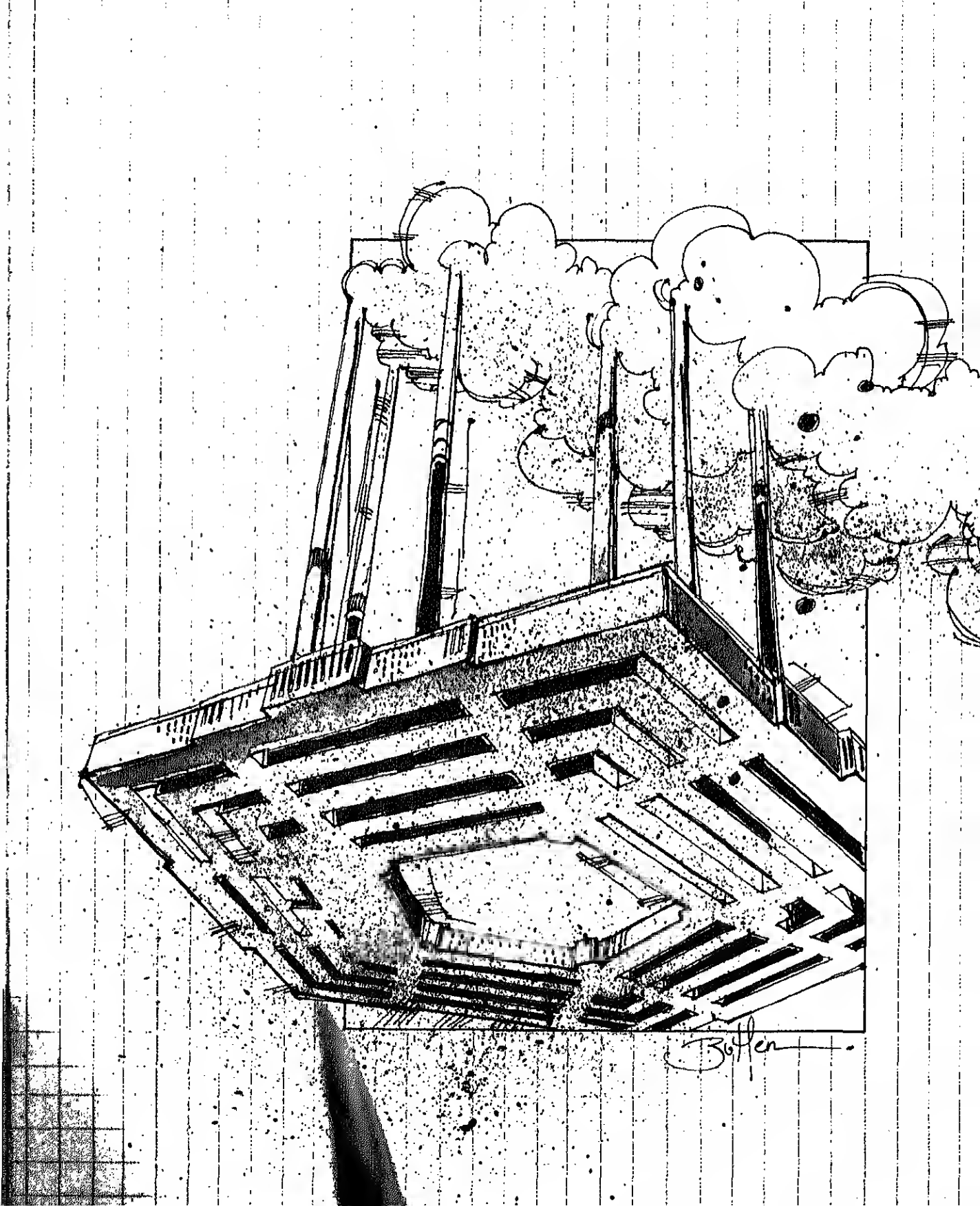

Improving defense contractor productivity

By RICHARD A. STIMSON
and
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ostering greater manufacturing efficiencies among defense contractors is the objective of several new programs and initiatives sponsored by the Defense Department.

veral factors have converged in recent years to ɔcus national attention on productivity. The gen- economic condition of the country, international etition, and low capital investment rates have pro- the impetus for initiatives to bolster our produc- . In addition, the potential for major manufactur- ıprovements due to technological advances presents :alleled opportunities.

t as productivity has become a priority at the na- l level, so too has the achievement of increased ıfacturing efficiencies by defense contractors be- of paramount concern to the Department of De- . It is a critical element in improving our defense ıre and, most importantly, in reducing acquisition .

the largest purchaser of systems, equipment, and ucts in the federal government—with a procure- budget of some $90 billion in FY 1984—DoD is :ly aware of the breadth and scope of the produc- ' problem and its attendant effect on system ac- tion costs. The department also recognizes its unique ion of leverage in promoting improvement in the mercial industrial base on which DoD heavily re-

et actual achievement of improved productivity can xtremely elusive. In manufacturing, it equates to ng the best combination of design, machinery, peo- suppliers, and management systems—a concep- y simple but practically complex task.

ne reason is that productivity is not confined simply ıchievement of efficiencies in the manufacturing :ess, since this process may account for as little as 10 percent of total efforts on some contracts. Productivity is of vital importance in the management, white-collar, and "overhead" categories as well. It has many facets, among which is ensuring that careful definition of goals precedes research and development projects. Often, too, one has the option of achieving greater productivity by procuring standardized or commercially available products that will satisfy defense needs.

Moreover, in defense there is the additional problem of scope. A wide variety of products is manufactured for DoD, ranging from electronics to missiles and from aircraft and tanks to ships. Productivity problems and solutions in the various segments of industry vary. Much more production is done and many more dollars spent at the subcontractor and vendor levels than at the level of prime contractors. For example, the B-1 bomber program has approximately 3,000 subcontractors and vendors. Relationships between them and mechanisms to reach this base differ extensively. Issues such as the proper number of subcontractors and vendors (not too few and yet not too many) need new analysis. In addition, the very process of acquiring defense systems is more intricate than that of acquiring commercial products. Based on the complexity, technical sophistication, and uniqueness of the products, DoD's participation with its contractors is typically much more involved.

Finally, we face the challenge of producing defense systems and equipment more economically in an environment characterized by batch production methods, which involve small quantities, and by deliveries over a period of time. Engineering changes also occur frequently. DoD needs to develop and implement flexible